LEGISLATIVE FINANCE-HOUSE/SENATE FINANCE COMM. FILES 8879

HJR 38 420

HJR 38

HOUSE COMMITTEE REPORT

(11)
Date Referred: March 31, 1989 FURTHER REFERRALS:

Date of Committee Action: 4/10/89

The FINANCE Committee considered: HJR 38

HOUSE JOINT RESOLUTION NO. 38

[HUD HOUSING PROGRAMS]

Relating to housing programs of the United States Department of Housing and Urban Development.

RECOMMENDATIONS:
[ ] be replaced with _____ [ ] the same title [ ] a new title

[ ] have attached amendment(s)

[X] do pass

[ ] do not pass

[ ] no recommendation

[ ] individual recommendations

[ ] additional referral to the _____ Committee

ADOPTS: _____ letter of intent

ATTACHES NEW FISCAL NOTE(s): (Dept)

[ ] fiscal impact _____

[ ] zero fiscal note _____

[ ] zero with analysis _____

APPROVES PREVIOUS: (Date/Dept.)

[ ] fiscal note(s) _____

[X] zero fiscal note(s) 3/31 CRA

[ ] zero fn/analysis _____

SIGNING DO PASS:

HOFFMAN

LARSON

BROWN

KOPONEN

ULMER

BARNES

RIEGER

WALLIS

SHULTZ

SIGNING: (Check approp. column)

	Do Not Pass	No Rec	Amend
PHILLIPS		✓	

Co-Chairman's Signature

Co-Chairman's Signature

STATE OF ALASKA
1989 LEGISLATIVE SESSION

BILL VERSION: HJR 38
PUBLISH DATE: _____

FISCAL NOTE

REQUEST:

Revision Date: _____
Title: "Relating to housing programs of US Dept HUD"
Sponsor: Rep Hoffman
Requestor: _____

Agency Affected: Community & Regional Affairs
BRU: _____
Components: _____

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	-0-	-0-	-0-	-0-	-0-	-0-
CAPITAL						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND	-0-	-0-	-0-	-0-	-0-	-0-
FEDERAL FUNDS						
OTHER						
TOTAL	-0-	-0-	-0-	-0-	-0-	-0-

POSITIONS:

FULL-TIME	-0-	-0-	-0-	-0-	-0-	-0-
PART-TIME						
TEMPORARY						

ANALYSIS: (Attach a separate page if necessary)

Jim Plasman

Prepared by: Jim Plasman, Deputy Director
Phone: 465-4750
Division: Municipal & Regional Assistance
Date: 3-27-89

Approved by Commissioner: David G. Cole
Date: 3-27-89
Agency: Community & Regional Affairs

Distribution (by preparer):
Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)

Introduced: 3/20/89
Referred:

6-1066/

IN THE HOUSE BY HOFFMAN

HOUSE JOINT RESOLUTION NO. 38

IN THE LEGISLATURE OF THE STATE OF ALASKA

SIXTEENTH LEGISLATURE - FIRST SESSION

Relating to housing programs of the United States Department of Housing and Urban Development.

BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

WHEREAS an inadequate supply of housing units for rural and low-income residents of Alaska exists despite the housing constructed in the urban areas of the state; and

WHEREAS a recent study completed by the Department of Community and Regional Affairs documented a statewide need for 6,700 units for Alaska Natives alone and also found that a majority of the existing housing units surveyed were substandard; and

WHEREAS the demand for housing for low-income and rural residents of the state is growing; and

WHEREAS the number of units built by the Department of Housing and Urban Development in 1988 did not meet the need for new housing units and, in fact, represents a substantial reduction in the number of units from previous years' efforts by the department; and

WHEREAS the present federal budget does not contain an appropriation for use by regional housing authorities of money for housing construction; and

WHEREAS further reduction in the number of housing units funded in the state by the Congress and the department would leave many individuals in substandard housing; and

WHEREAS the State of Alaska has recognized the demand for improved housing for low-income and rural residents by appropriating $3,500,000 in

each of the last two years to regional housing authorities in order to encourage federal participation;

BE IT RESOLVED by the Alaska State Legislature that the Congress of the United States and the United States Department of Housing and Urban Development are urged to maintain housing programs in the State of Alaska at or above their 1988 levels.

COPIES of this resolution shall be sent to the Honorable Jack Kemp, Secretary of the Department of Housing and Urban Development; the Honorable Daniel K. Inouye, Chairman of the U.S. Senate Select Committee on Indian Affairs; the Honorable John McCain, Ranking Minority Member of the U.S. Senate Select Committee on Indian Affairs; the Honorable Morris K. Udall, Chairman of the House Committee on Interior and Insular Affairs; and to the Honorable Ted Stevens and the Honorable Frank Murkowski, U.S. Senators, and the Honorable Don Young, U.S. Representative, members of the Alaska delegation in Congress.

STEVE COWPER, GOVERNOR

DEPT. OF COMMUNITY & REGIONAL AFFAIRS

OFFICE OF THE COMMISSIONER

P.O. BOX B
JUNEAU, ALASKA 99811-2100
PHONE: (907) 465-4700

949 E. 36TH AVENUE, SUITE 400
ANCHORAGE, ALASKA 99508-4302
PHONE: (907) 563-1073

March 30, 1989

POSITION PAPER

RE: House Joint Resolution 38

SPONSOR: Representative Hoffman

Program Effects of Resolution

There would be no major effects on the Department of Community and Regional Affairs from this Resolution.

Comments

The Department strongly supports this Resolution. The federal funding sought by this resolution are important to residents throughout rural Alaska.

The level of funding requested by the Resolution is a 1988 maintenance level allocation of federal funding by the U.S. Department of Housing and Urban Development to the regional housing authorities for construction of decent, safe and sanitary housing for Alaska's rural residents.

The effects of not having federal HUD funding for housing construction by the regional housing authorities would be devastating. There is no other program available for low-income housing to rural residents such as provided by the HUD funding to regional housing authorities. The number of people living in substandard housing throughout rural Alaska would increase through deterioration of existing housing and population increase.

A 1988 rural housing study completed by the Department of Community and Regional Affairs documented a current need for 3,740 units of new housing for rural Alaska. The U.S. Department of HUD will use the results of this survey in determining the funding allocations to Alaska. The State of Alaska has continued its commitment to reduce the number of families living in substandard, overcrowded, unsanitary housing by providing funding for water and sewer, roads, and electrical distribution facilities to the majority of houses constructed by HUD funding even during times of reduced state revenues.

The Department of Community and Regional Affairs has been very active in rural housing issues and will continue cooperative efforts with federal agencies in encouraging legislation to improve the living standards of Alaska's rural residents.

David G. Hoffman, Commissioner

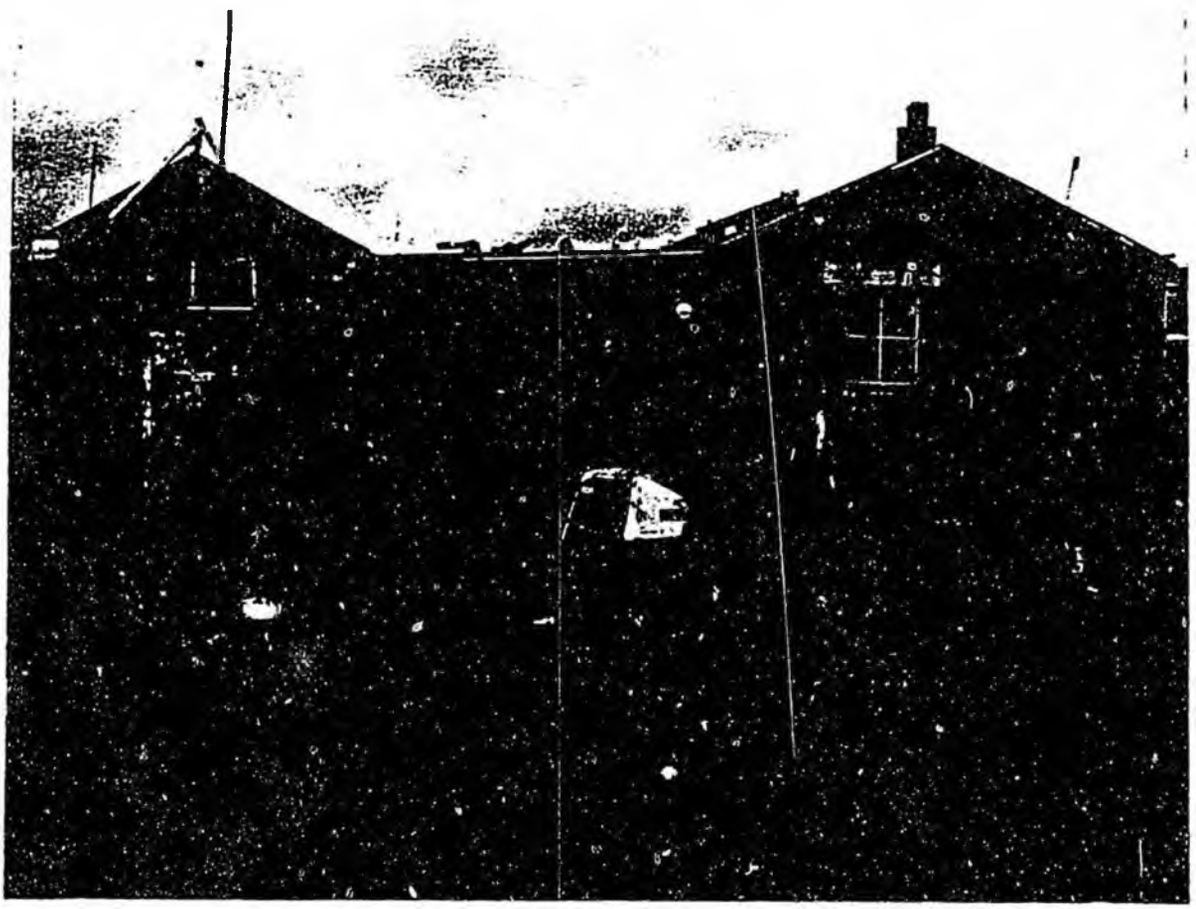
THE FOLLOWING DOCUMENT HAS

NOT BEEN FILMED BUT IS

AVAILABLE IN THE ORIGINAL

FILE

1988 Rural Housing Needs Assessment Study



DOYON Region - Photo by Rob Stapleton, Jr.

State of Alaska
Steve Cowper, Governor

Department of Community
and Regional Affairs
David G. Hoffman, Commissioner

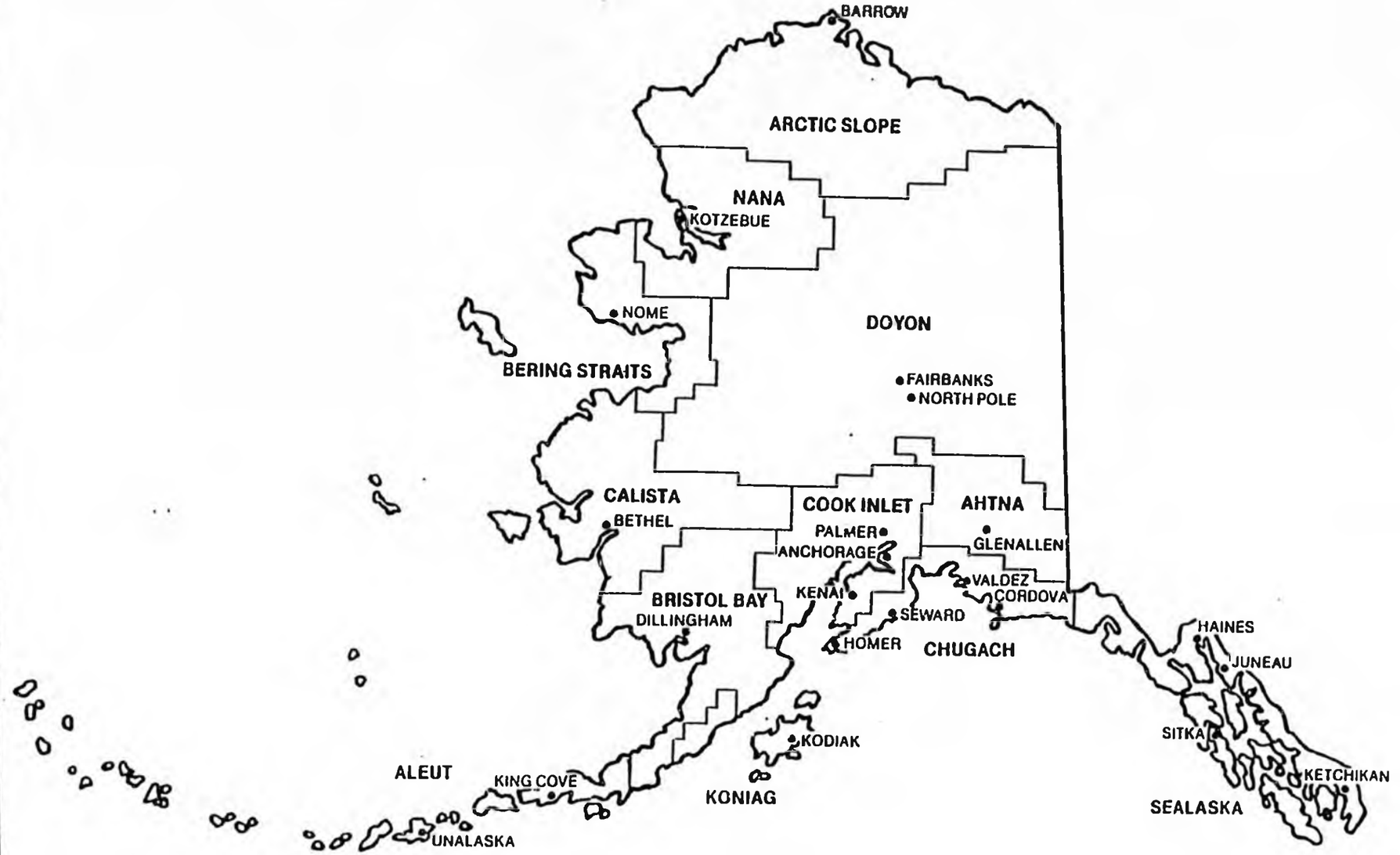
Submitted in fulfillment under contract 88-0137 to the
Alaska Department of Community and Regional Affairs

by

Rural Alaska Community Action Program (RurAL CAP)
ASK* Marketing/Information Search
Alaska Public Interest Research Group (AKPIRG)

March 1988

TABLE OF CONTENTS


BARROW
ARCTIC SLOPE
NANA
KOTZEBUE
NOME
DOYON
BERING STRAITS
FAIRBANKS
NORTH POLE
CALISTA
BETHEL
COOK INLET
AHTNA
PALMER
ANCHORAGE
GLENALLEN
VALDEZ
CORDOVA
KENAI
BRISTOL BAY
DILLINGHAM
SEWARD
HOMER
CHUGACH
HAINES
JUNEAU
SITKA
KODIAK
KETCHIKAN
ALEUT
KING COVE
KONIAG
SEALASKA
UNALASKA

PREFACE

The 1987 Alaska State Legislature passed Senate Concurrent Resolution 21 requesting the Department of Community and Regional Affairs to conduct an assessment of rural housing conditions and of the need for rural housing. The Alaska Department of Community and Regional Affairs contracted with the Rural Alaska Community Action Program (RurAL CAP) to conduct a study of current conditions in rural housing and the need for additional rural housing.

Excluded under contract specifications, were: the Municipality of Anchorage, the City of Fairbanks, the City of Juneau, the City of Sitka, the City of Ketchikan and all military bases.

The study was conducted in two phases. In Phase I all the existing relevant information on housing conditions in Alaska was gathered and assessed. It was expected that a survey would need to be conducted to supplement and update existing data concerning rural housing.

In Phase II, a household-level survey was conducted. Housing authority directors, community planners and other key informants were also interviewed, and the information gathered was analysed to accurately assess the current conditions of rural housing stock and to project future housing needs.

This report contains the findings of the current housing conditions and needs in the rural Alaska.

March 14, 1988

-Rural Alaska Community Action Program (RurAL CAP)
-Alaska Public Interest Research Group (AKPIRG)
-ASK* Marketing/Information Search

INTRODUCTION

According to housing authority executive directors, experienced weatherization contractors, Alaska Dept. of Community and Regional Affairs (DCRA), and the Housing Advisory Committee, the evaluation of these four basic categories provides an accurate indication of the living conditions in rural Alaska. These categories were:

- o *crowdedness within the home,*
- o *ability to maintain a comfortable temperature in the home,*
- o *home sanitation facilities*
- o *safety of the home.*

There were several factors within each of these four categories that were used in evaluating overall living conditions within a community or region.

The first task was to determine the amount of new housing stock that is currently needed and the number of homes needing immediate repair. The second task involved projecting new housing stock and repairs required over the next ten years.

The number of households per region was estimated by dividing the total 1985 population provided by the Alaska State Demographer's office, by the average household size data acquired from the survey. The number of households per region is found in several of this report's summary tables.

In many of the tables, the quantity listed under TOTAL is a summary of this report's survey data. Additional statistical information on confidence levels, derivations, and other features too detailed for inclusion in this general audience report is available. This *excludes* the Municipality of Anchorage, the City of Fairbanks, the City of Juneau, the City of Sitka, the City of Ketchikan and all military bases. Additional statistical information on confidence levels, standard deviations, means and features too detailed for inclusion in this general audience report is available.

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The key findings of the 1988 Rural Housing Needs Assessment Study include:

- HOUSEHOLD SIZE AND OVERCROWDING

  The average number of members per household in rural Alaska was 3.70. The average household size ranged from a low of 2.6 in Ahtna region to a high of 5.3 in NANA region. *In comparison, Anchorage households have an average size of 2.72.*

  The Arctic Slope region had the highest percentage, (18.7%), of households with three or more generations per house. Calista region was second with 16.4% and Bering Straits region had 15.4%. Cook Inlet had only 0.9% of households with three or more generations.

  Overcrowding conditions appeared to be the worst in the Calista and NANA regions. **29% of households in these regions had 100 or less square feet per resident..**

  The average house size ranged from 650 sq. ft. in Bering Straits region to 1,996 sq. ft. in Chugach region while the average was 1,162 sq.ft. *In comparison, Anchorage households have an average of 1,635 square feet per house.*

  Nearly **87% of the houses in NANA region had less than 300 square feet.** 81% of the houses in Calista region and 72% of the houses in Doyon region were less than 300 sq ft.

  The average square footage per resident ranged from 616 sq.ft. per resident in the Cook Inlet region to 137 sq.ft. per resident in the Bering Straits region. The survey average was 333 sq.ft. per resident. In comparison, Anchorage had an average of 600 sq.ft. per resident based on an average household size of 2.72 and 1,635 average sq.ft. per residence.

- PHYSICAL CONDITION OF DWELLINGS

  43% of the house foundations needed major repair in Bristol Bay region. 57% of the houses in Bristol Bay region and 43% of houses in Ahtna region needed major repair.

  The highest percentage of houses rated in need of replacement by region was Ahtna with 21%, followed by Doyon region, 17%, Aleut region, 10% and NANA region, 10%.

  The **total 6,740 new houses needed** was determined by consolidating the total number of homes needing immediate replacement with the total number of households with three or more generations. **Doyon region alone accounted for 3,169** of the new houses needed.

Comments and observations from field interviewers included several inches of glaciation on walls and windows, snow-filled attics, badly damaged roofs and siding from high winds, and seriously heaved foundations. Without correction, foundation heaving negates most benefits from weatherization activities since windows and doors become warped or separated from the house frame.

• SIGNIFICANCE OF FINDINGS AND ESTIMATED COST OF CORRECTIVE ACTION

Although conditions vary widely, the inescapable conclusion apparent from the survey results is that housing in rural Alaska has dramatically poor housing conditions in terms of space per resident and state of repair. **Crowded multi-generational families occupying dwellings in run-down condition is far too prevalent.**

Based on the current costs for rural housing of $116,000 per new house as described in this report, **$781,813,000 will be needed to build the estimated 6,740 houses.**

If 6,740 houses were built to provide new housing for homes needing immediate replacement and new houses for the displaced third or fourth generations, **overcrowded conditions in rural Alaska would still be a problem.**

In order to address crowded conditions not due to multi-generational households three enhancement levels were examined:

Replace/add to houses with 200 sq. ft. or less per resident
Replace/add to houses with 250 sq. ft. or less per resident
Replace/add to houses with 300 sq. ft. or less per resident

Two solutions were considered: a 320 sq.ft. addition at a cost of $15,000 or, if the addition did not alleviate the conditions, a new house at a cost of $116,000. This $15,000 figure is based on the average cost of a BIA housing addition under the HIP program.

It was estimated that a total of approximately **19,188 houses had 200 sq. ft. or less per resident**; 15,088 of these would require an addition while 4,100 need new houses. Based on current costs and excluding homes needing replacement, $491,717,000 would be required to alleviate overcrowding at the 200 sq.ft. level. At the 250 sq.ft. level, $692,243,000 would be required, and at the 300 sq.ft. level, $882,521,000 would be required.

The combined cost of providing new housing for homes needing replacement; third and fourth generations needing a home; and additions or new homes to alleviate overcrowding at 250 sq.ft. or less per resident was **$1,474,056,000.**

- NEED FOR A COORDINATED, COMPUTERIZED HOUSING INFORMATION SYSTEM

In the course of acquiring data for this study, the foundation for an excellent statewide population and demographic computer database was laid. It was also determined that there is a definite need and interest to establish a central computer database with dial-in access for weatherization contractors.

Although the State of Alaska Weatherization Office collects summary data from all weatherization contractors, they do not maintain a computerized database. The result is that there is no way to analyse statewide data or to create reports as needed.

We are aware that there have been discussions with the Department of Energy to which the DCRA Weatherization program submits reports. *It is important that any planning for a coordinated, computerized data collection and reporting system include the capture of essential community demographic and housing data.* This information is valuable for planning and monitoring of key social and economic trends statewide. Coordination with the AK Department of Fish and Game's subsistence database must also be included.

Major benefits obtained from this will lower administration costs, improved reporting, forecasting support, improved coordination of information between agencies.

- POTENTIAL FOR SMALL-SCALE MANUFACTURING AND LOCAL JOBS

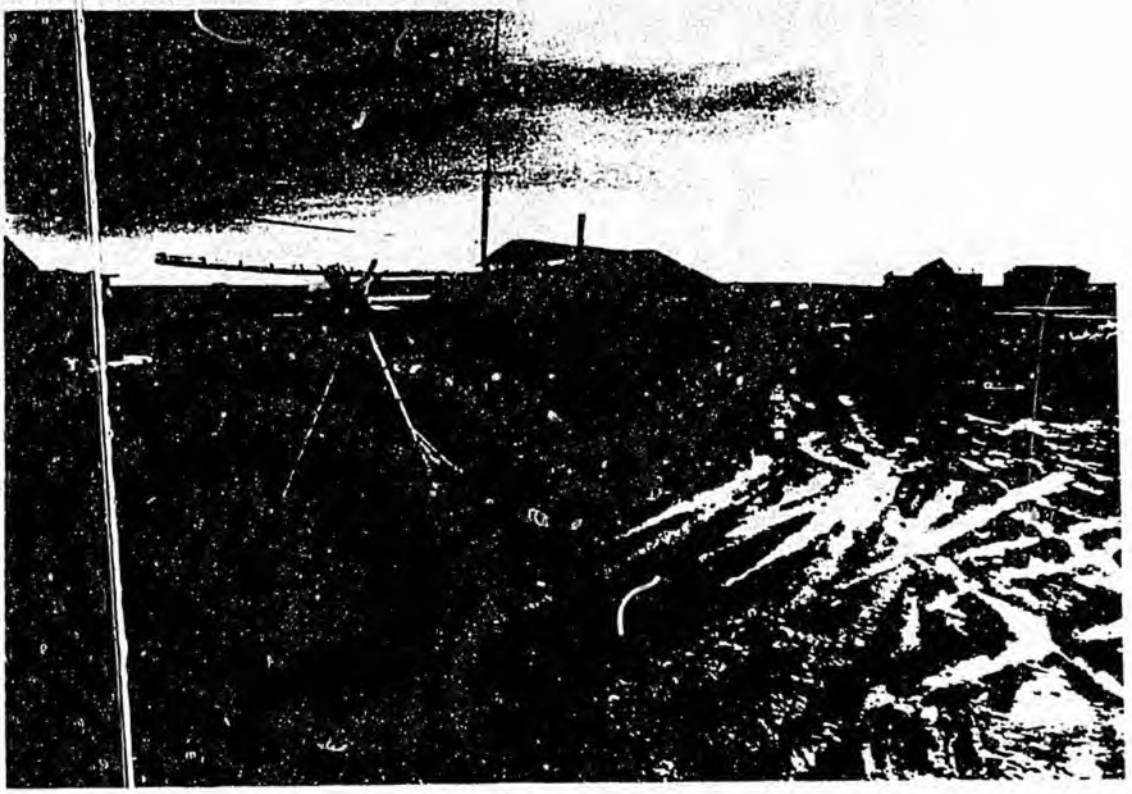
From the period of 1984 through to and including 1988, the Weatherization program represents a significant ongoing residential construction program in Alaska, estimated to include *over $9.1 million in materials alone.* When we consider this plus the added economic contribution of a major rural housing program which can be valued at approximately $1.2 billion to add to the existing housing stock and remedy deficient dwellings, the *potential* exists to aid the development of Alaskan-based wood products, thermal window and insulation manufacturing. With adequate market planning, local industries could leverage off the in-state market for export.

We suggest that an economic feasibility study be commissioned to examine the various aspects of this.

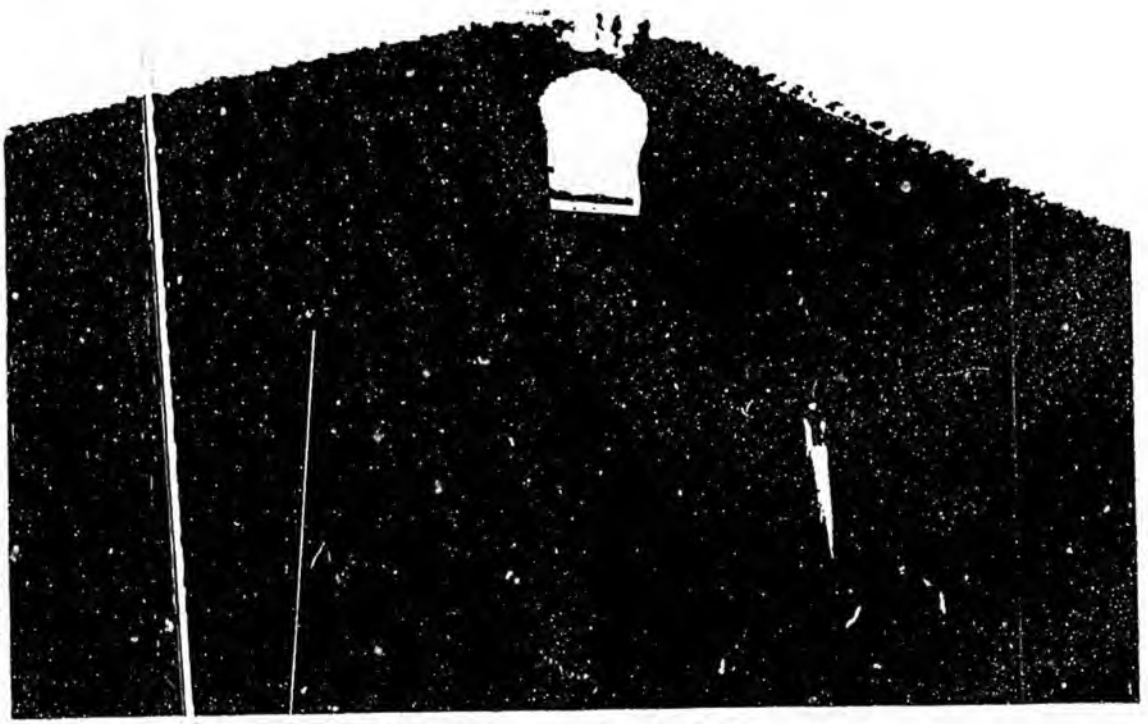
STATE WEATHERIZATION COSTS - APPROXIMATE VALUES ($ 000's)

	1984	1985	1986	1987	1988
Total Budget	$7,000.	$8,000.	$4,575.	$3,984.	$3,810.
Administration	820.	950.	526.	394.	449.
Program support	3,000.	3,800.	2,054.	1,878.	1,787.
Materials	2,500.	2,550.	1,453.	1,279.	1,191.
Insurance	125.	200.	175.	172.	130.
Transportation	555.	500.	367.	261.	253.
Homes Served	2,300	2,700	1 000	1,600	1,860

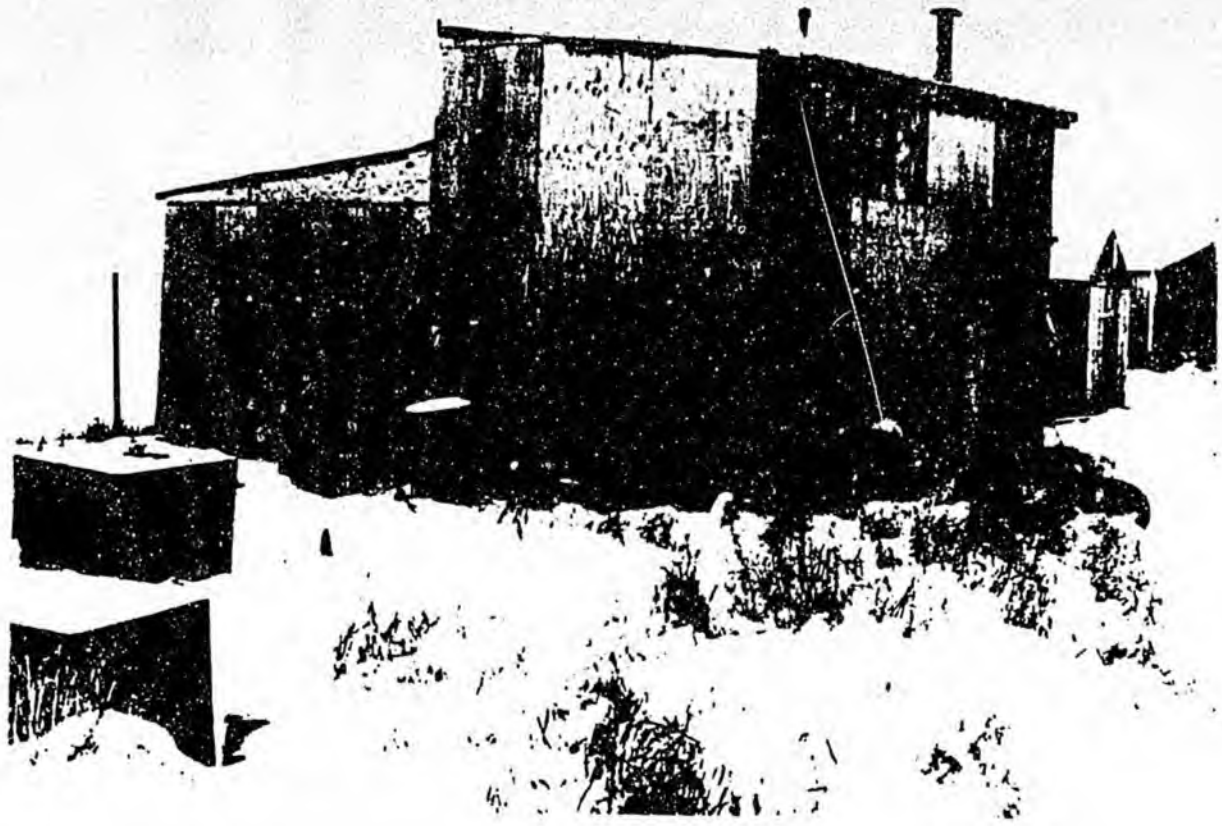
Source: AK Dept. Community Regional Affairs, Weatherization



NANA Region - Rob Stapleton, Jr. 1978



DOYON Region Fairbanks Area

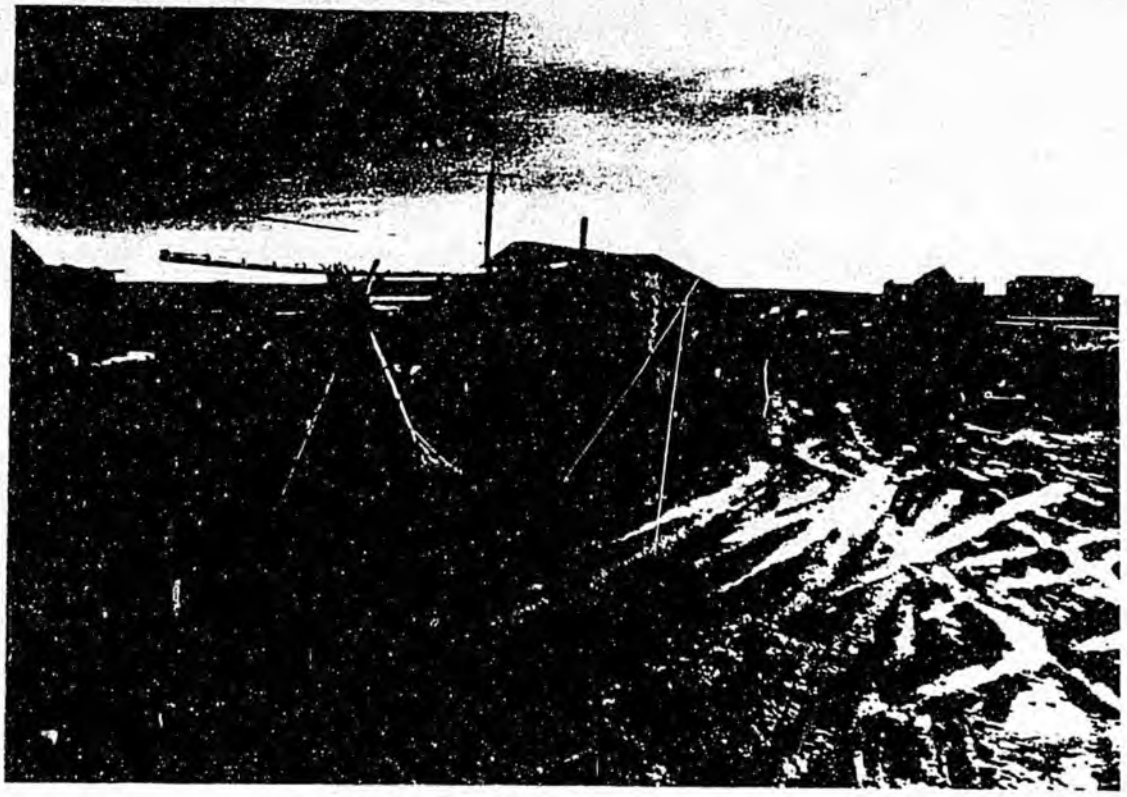


CALISTA Region - RurAL CAP Weatherized Home 1987 - David Hardenbergh
Chevak, AK

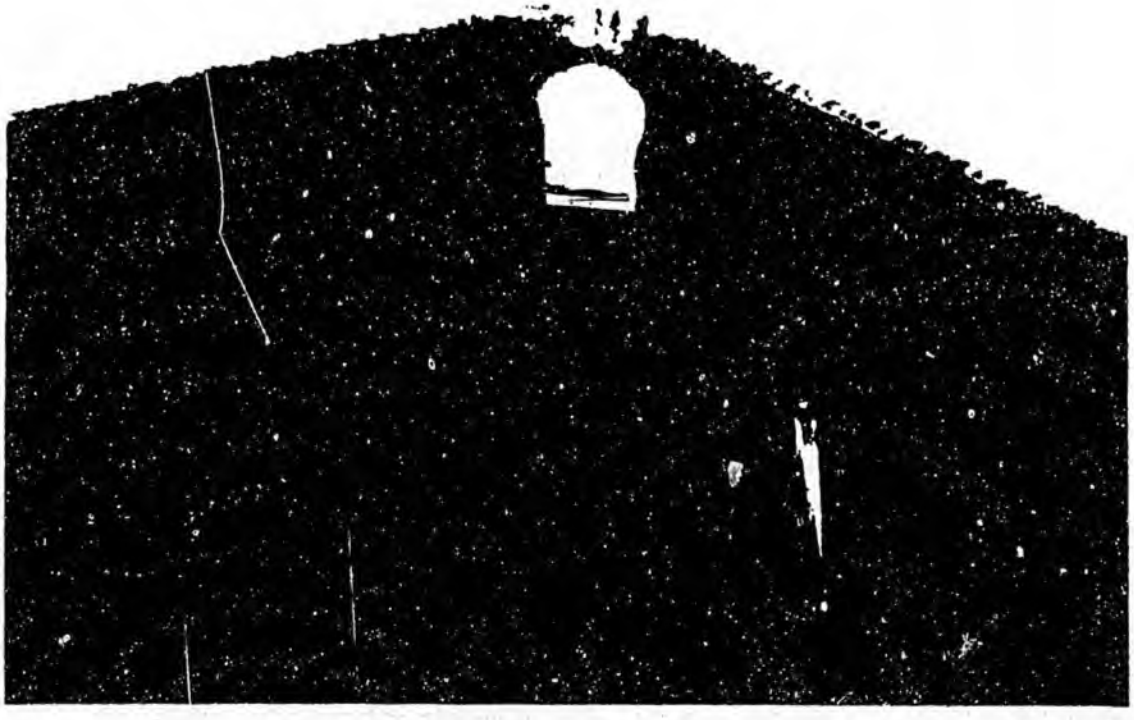
CALISTA Region RurAL CAP Weatherized Home 1987 David Hardenbergh
Chevak, AK

CORRECTION

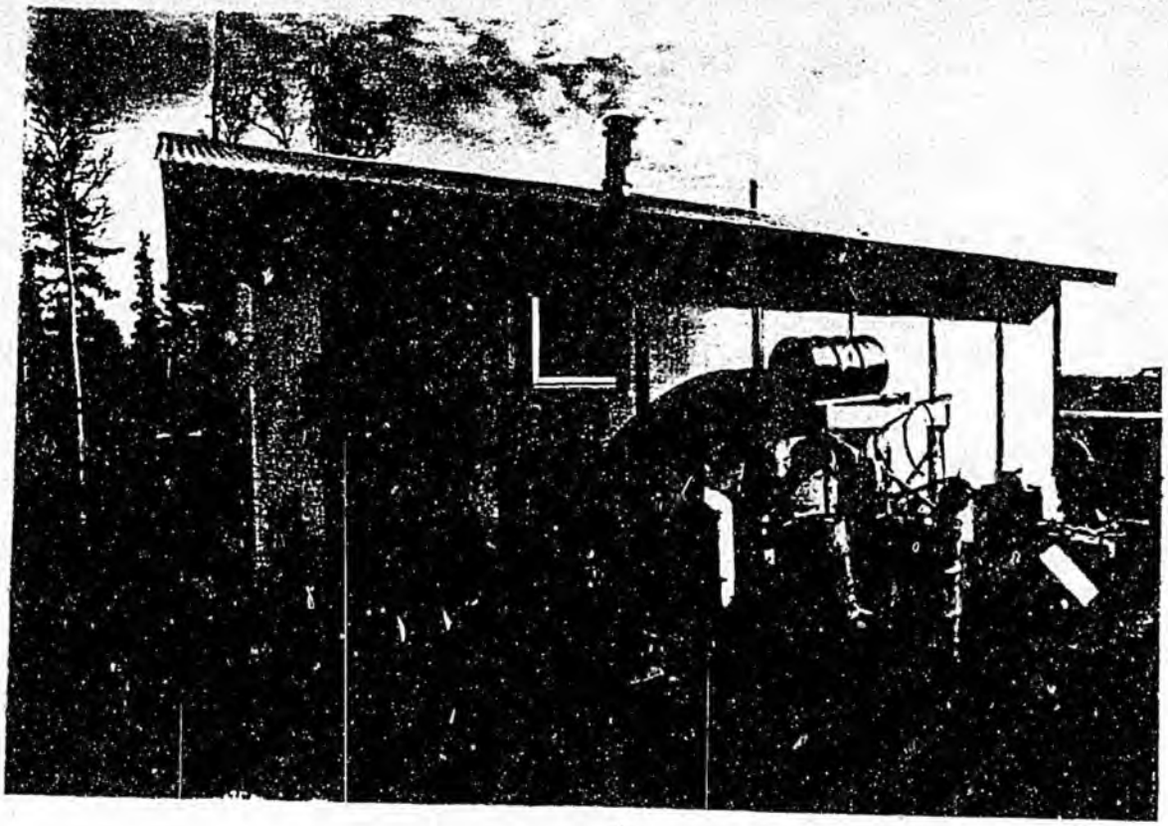
THIS DOCUMENT
HAS BEEN REPHOTOGRAPHED
TO ASSURE LEGIBILITY



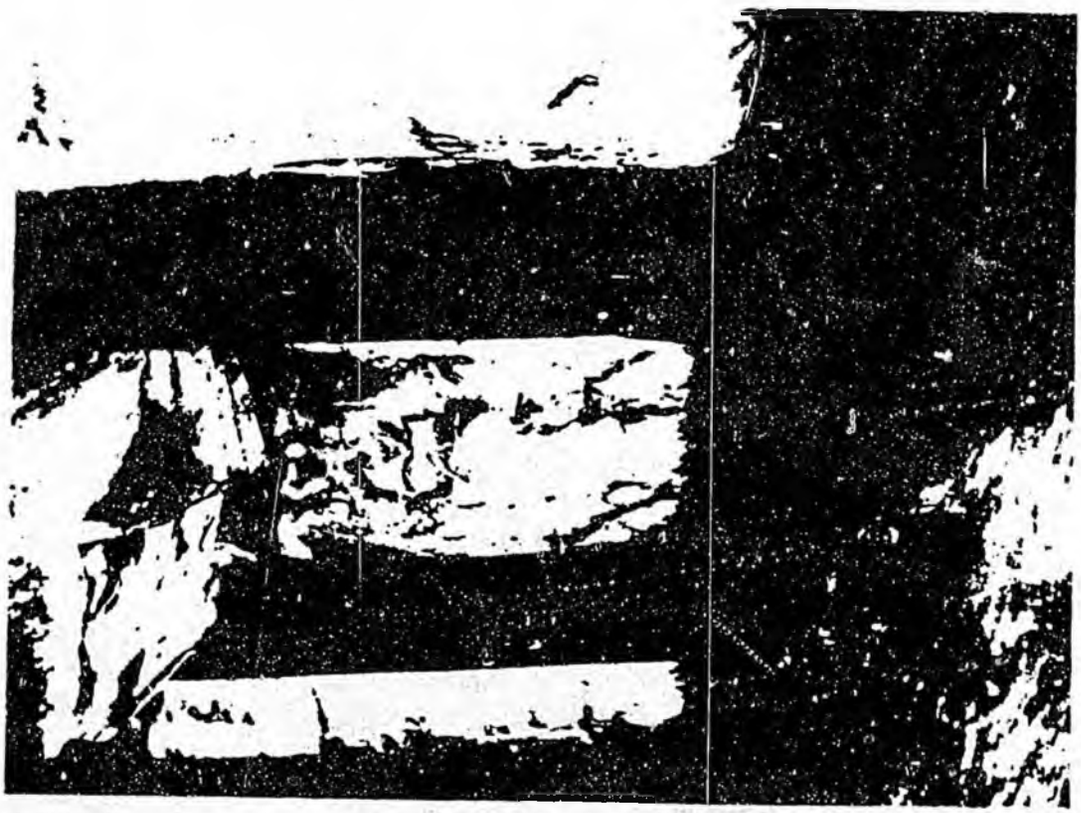
NANA Region - Rob Stapleton, Jr. 1978



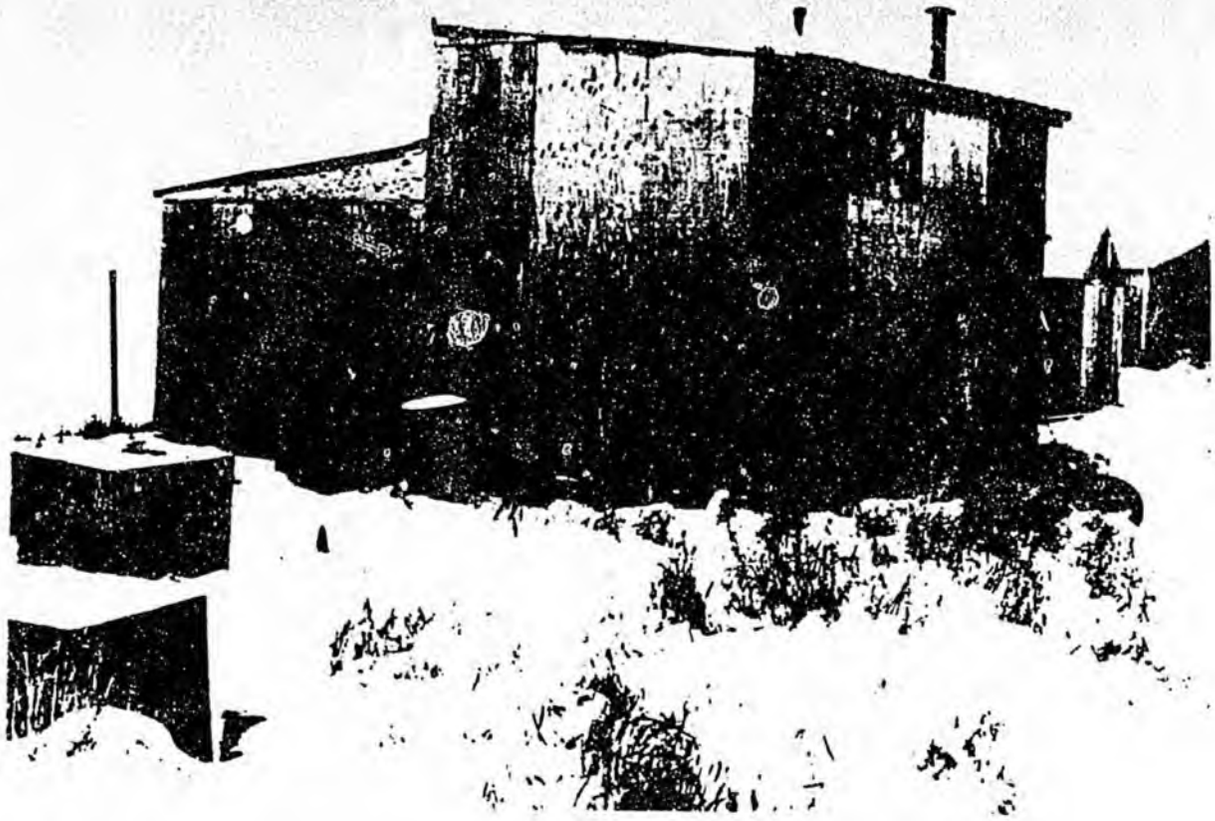
DOYON Region Fairbanks Area



CALISTA Region - Rob Stapleton, Jr. 1978



KONIAG Region - Kodiak



CALISTA Region - RurAL CAP Weatherized Home 1987 - David Hardenbergh
Chevak, AK

CALISTA Region - RurAL CAP Weatherized Home 1987 - David Hardenbergh
Chevak, AK

ABBREVIATIONS USED IN THIS REPORT

AK	Alaska
AKPIRG	Alaska Public Interest Research Group
Alaska CDC	Alaska Community Development Corporation
ANV	Alaska Native Village
ASK*	ASK* Marketing/Information Search
BIA	Bureau of Indian Affairs
CDP	Census Designated Place
DCRA	Department of Community and Regional Affairs
HA	Housing Authority
HIP	Housing Improvement Program (of BIA)
HH	Household(s)
HUD	Housing and Urban Development
PHS	Public Health Service
Res	Residents or Occupants of a house
RurAL CAP	Rural Alaska Community Action Program
SIH	Super Insulated Homes
TCC	Tanana Chiefs Conference

METHODOLOGY

HOUSING METHODOLOGY

PHASE I - LITERATURE REVIEW

Phase I of the 1988 Rural Housing Needs Assessment study entailed reviewing various sources of information on housing in Alaska. Most of the data was not available on a community level because each office has a different use and need for housing data. In addition, those offices without computers do not have the capacity to maintain current records for all the communities they serve. After a thorough review, the primary sources of information on housing conditions were consolidated from regional housing authorities, the State DCRA Weatherization Section; Rural Alaska Community Action Program; Tanana Chiefs Conference; Regional Housing Authorities and the Bureau of Indian Affairs.

The first task for Phase I involved dividing the State into meaningful regions for reporting rural housing conditions. DCRA stipulated in the RFP that Anchorage, Fairbanks, Juneau, Sitka and Ketchikan (within the city limits), be excluded from this study. The geographic areas defined by the 12 Native Regional Corporations and areas served by each Regional Housing Authority met the following criteria:

- representative of the various Alaskan *climatic conditions*
- representative of all major Alaskan *native languages*
- representative of what housing authorities believe to be *differing housing conditions*
- correspondence with designated *census areas*
- correspondence with already *recognized geographic areas* used for reporting housing information
- most importantly, correspondence with geographic areas *meaningful to the users* of the data base and readers of this report

One source of information that did not geographically correspond was DCRA Weatherization Section data. DCRA had defined five regions based on their regional office locations.

For the purposes of this document, Native Corporation names were used to refer to specific regions. The table below shows the correspondence between Native Corporations and housing authorities.

SURVEY REGIONS

REGION	NATIVE CORPORATION	HOUSING AUTHORITY
1	Ahtna Inc.	Copper River Basin Regional HA
2	The Aleut Corp.	Aleutian Housing Authority
3	Arctic Slope Regional Corp.	ASRC Housing Authority
4	Bering Straits Native Corp.	Bering Straits Regional HA
5	Bristol Bay Native Corp.	Bristol Bay Housing Authority
6	Calista Corp.	AVCP Housing Authority
7	Chugach Alaska Corp.	North Pacific Rim HA
8	Cook Inlet Regional Corp.	Cook Inlet Housing Authority
9	Doyon Ltd.	Interior Regional HA
10	Koniag Inc.	Kodiak Island Housing Authority
11	NANA Regional Corp.	Northwest Inupiat HA
12	Sealaska Corp.	Tlingit-Haida Regional HA and Metlakatla Housing Authority

Housing authorities not listed were the Alaska State Building Authority and Baranof Island Housing Authority. The Alaska State Building Authority does not cover a specific region, but rather, larger communities across the State. Baranof Island Housing Authority only has jurisdiction over Sitka, which was not included in this project.

The second task was creating a community level data base. The original list of communities was the 1980 Census Designated Place Names (CDP) and/or Alaska Native Villages (ANV). The Alaska database of ASK* Marketing/ Information Search includes 333 populated places for Alaska. There were some cases where, due to typographic or local variations of spelling, one community was known by two different names, in this case, both names were listed separated by a slash (/).

When the initial base of housing data was assessed for content, several pieces of vital information were still missing, thus mandating a direct survey of communities to fill in the missing pieces.

PHASE II - SURVEY METHODOLOGY

Phase II included the design of the survey methodology and questionnaire; data entry and verification; statistical analysis; and development of the final report.

A) Selection of Representative Communities:

Since not every rural Alaskan community could be surveyed, the first step was to choose a representative selection of communities to study. The representative communities had to meet the following criteria:

Population size: The communities were grouped by the 12 regions, then by community size. The number of communities chosen from each region depended on the region's size in relation to the state total (excluding

the five cities and all military bases). At least three communities from different size groups (small, medium, and large population) were selected from each region. A fourth community was chosen from larger regions such as Calista, Cook Inlet, Doyon and Sealaska.

Post 1982 HUD homes: The number of existing HUD homes built since 1982 was reviewed. A community was chosen if it reflected the majority of communities in its size group with regard to the presence or absence of HUD homes. This was used as a criteria because the presence of newer HUD housing in a community would influence overall housing conditions.

Weatherization date: The number of communities that had been weatherized was reviewed. A representative community was chosen to reflect the majority of communities in its size group in terms of weatherization. When a community is weatherized, every house in the community is upgraded, so the fact that a community was weatherized greatly influences the housing condition.

Illustration Example for Region X:

	Popul	Cumul. %	With HUD	Has Been Weather.	Survey Choice
Community 1	33	7.7	X	X	X
Community 2	38	15.4	X		
Community 3	38	23.1	X	X	
Community 4	40	30.8		X	
Community 5	57	38.5	X	X	
Community 6	64	46.2			X
Community 7	66	53.8			
Community 8	82	61.5	X		
Community 9	91	69.2		X	
Community 10	98	76.9			
Community 11	130	84.6	X	X	
Community 12	229	92.3			X
Community 13	499	100			

In the illustration above, the category of communities within Region X that have populations under 50 (communities 1 through 4) are characterized by:

a) having HUD homes (3 communities out of 4)

b) having been weatherized (also 3 out of 4).

Therefore, the representative community selected in this size category must have both a and b. There are two possible representative communities; and this illustration chose community #1. The same approach in the other size categories leads to community 6 and community 12 being chosen.

B) Questionnaire design:

The questionnaire was designed to determine:

- Housing condition including doors, windows, foundation, size of house, age of house, number of rooms, and other factors

- Type of housing: frame, log, single family, multi-family
- Presence of safety devices such as egress windows and smoke detectors
- Sources and effectiveness of heating and insulation
- Number of residents and their demographics

The instrument was designed with input from senior consultants at ASK* Marketing/Information Search and the Weatherization Director at RurAL CAP. The Weatherization Director had experience with canvassing remote Alaskan communities and in weatherizing communities all over the State. The survey was reviewed by RurAL CAP personnel fluent in native languages to ensure interpretability of the instrument. The survey was revised after a pre-test and approved for implementation by DCRA and the Housing Advisory Committee. Consideration was made in the design to ensure it would be usable for future data gathering by any agency or entity.

C) Sampling Methodology:

The number of surveys to be taken in each selected community was determined by the estimated number of households in the community as shown in the following table. The number of households was estimated by dividing the 1985 population by the 1980 Census residents per household.

0 to 60 Households	Every House
61 to 100 Households	Every Other House
100 to 184 Households	Every Third House
185 Households or more	Cluster Sample

D) Implementation:

The surveys were conducted using professional carpenters or experienced weatherization personnel, thereby providing a common frame of reference from which to judge housing condition. This group was briefed on survey content by the Weatherization Director. Individual interviewers were chosen because they were experienced in doing similar surveys and were already known to villagers in many of our sample. An interpreter accompanied the interviewer as needed. The survey was conducted from January 13, 1988 to February 11, 1988.

SURVEY SUMMARY

	1985 Total Pop	% of Total Pop	Number of Comun.	% of Total Comun.	Total Households Surveyed	% of Total Surveys	Expected Error Rate +/-
Ahtna	3,034	1.4%	18	6%	71	5%	12%
Aleut	3,783	1.8%	13	4%	120	8%	9%
Arctic Slope	5,389	2.5%	9	3%	100	6%*	10%
Bering Sts	7,770	3.6%	19	6%	125	8%	9%
Bristol Bay	7,033	3.3%	30	10%	63	4%	12%
Calista	18,473	8.6%	49	16%	209	13%	7%
Chugach	8,916	4.1%	8	3%	118	8%	9%
Cook Inlet	73,142	34.0%	36	11%	220	14%	7%
Doyon	47,849	22.3%	61	19%	155	10%	8%
Koniag	11,221	5.2%	7	2%	114	7%	9%
NANA	5,790	2.7%	11	4%	113	7%	9%
Sealaska	22,479	10.5%	53	17%	141	9%*	8%
TOTAL	214,879	100%	314	100%	1549	100%	2.5%

* Note: Arctic Slope is missing the community of Point Lay. Interviewers were unable to travel there due to weather conditions. Sealaska region is missing the community of Kupreanof due to the loss of completed questionnaires by the mail service.

At the 95% confidence interval, the expected error rate for the entire survey was 2.5%.

E) Development of Population Projections:

In order to develop reasonable projections of housing demand for the communities included in this study, it is first necessary to develop population projections for these areas. This is very difficult, as certain types of necessary data are lacking, namely residential birth and death data at the community level. Lacking this data, we are forced to rely on a method, which is not as precise at the local level but can be accomplished with only limited data.

Two data sets were available for the formulation of population projections. Data released from the State Demographer's office in the Department of Labor were used in conjunction with population data from the State Department of Community and Regional Affairs. For the purposes of this study, it was deemed appropriate to combine data from the two sources and to use the adjusted historical data as background data for the formulation of population projections. Professional judgment and information from other sources (usually municipal or borough population estimates) were used to adjust the historical data in a few cases when appropriate.

Population projections are driven by assumptions. In the formulation of statewide projections through 1993, the following assumptions were used:

- The current population trends in Alaska most closely approximated the lower track projections released by the state Demographer's office in 1985 (Source - Alaska Population Projections, Department of Labor, October, 1986).

- The current downturn in the Alaskan economy will continue to promote net out-migration from the state through the year 1990. The total estimated number for net out-migration will closely track the estimates provided by the state Demographer (ibid.).

- After 1990, net out-migration will cease to be a factor, anticipating that economic recovery and diversification will positively affect this statistic by that date. For projection years 1991 through 1993 inclusive, net out-migration is projected to be zero or a slight positive, and the state's population will increase through natural growth. In Alaska, residential births currently exceed residential deaths by about nine thousand each year, and at about this level, population growth due to natural increase is projected for each of the forecast years after 1990.

- Fertility and mortality rates in the state will remain fairly stable throughout the projection period.

The method employed is a general proportioning technique. The state Demographer's long range population projections were used to provide total population size at the state level for future years. Discussions with Greg Williams, State Demographer, indicated that we seem to be following the low track. Future state populations for the various places within the state are then forced to sum to the statewide control totals.

As stated, the lack of residential birth and death data at the community level makes the development of population projections for these communities extremely difficult. Normally, it would be expected that natural increase would affect change in population size for these communities to a greater extent than net migration. The lack of vital statistics for these communities means that natural increase and net migration cannot be separated as components of population change. This forces us instead to rely on the less accurate proportioning technique which, in essence, holds that the population size of a particular community will increase or decrease in future years in proportion to the census area in which it is contained.

The projected total state population, which is derived from the State Demographer's projections can be broken down into two parts for the purposes of this study. The excluded or urban areas, which include the Municipality of Anchorage, the City of Fairbanks, the City of Juneau, the City of Sitka, the City of Ketchikan and all military bases, account for more than one-half of the state's total population. These areas are easier to project for future years since more detailed and accurate historical data are available at the local level. The remaining places in the state are the included or rural areas.

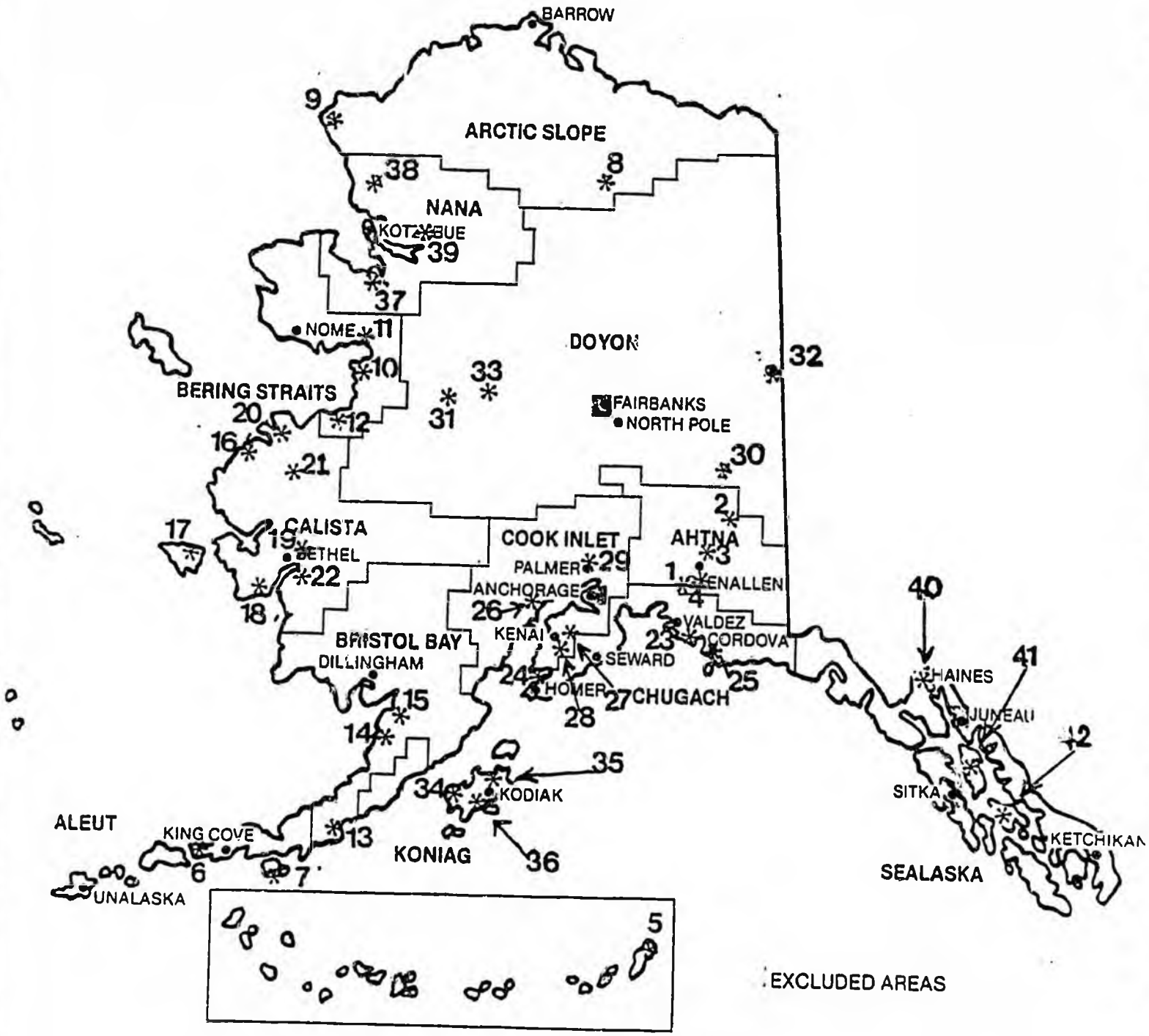
An interdependency exists between the urban and rural areas in the state. The boom and bust nature of the economy tends to cause periods of high in-migration and out-migration at the state level. Changes in net migration levels usually affect the population size of the urban areas more than the rural areas. However, during difficult economic periods when heavy net out-migration occurs, urban - rural intrastate migration patterns can also be affected. The current downturn in the state economy has severely affected a number of rural communities which promotes migration out of the rural areas into the cities.

While these dynamics cannot be completely accounted for in the formulation of population projections due to a lack of data, it is important that they are recognized in the process. Since more extensive historical data were available for the urban communities, population projections for these areas were developed first. These were then backed out of the statewide total projections. The residual or remainder then constitutes the total population of the rural communities included in this study.

Total rural population is then further broken down by housing region. This is accomplished by dividing the 1985 population of a particular housing region by the total rural population for 1985, and applying this ratio to the total rural projected population for future years. In essence, this procedure asserts that the historical ratios of housing region population to total rural population will remain fairly stable in the future.

MAP OF ALASKA SHOWING NATIVE CORPORATION/
HOUSING REGION BOUNDARIES AND 42 COMMUNITIES SURVEYED

(numbered and marked with *)



COMMUNITIES SURVEYED

Map	Region	Community	# Surveys Completed
1	Ahtna	TAZLINA (CDP) (ANV)	6
2	Ahtna	CHISTOCHINA (CDP) (ANV)	12
3	Ahtna	GULKANA (CDP) (ANV)	24
4	Ahtna	COPPER CENTER (CDP) (ANV	29
5	Aleut	NIKOLSKI (CDP) (ANV)	22
6	Aleut	COLD BAY CITY	49
7	Aleut	SAND POINT CITY (ANV)	49
8	Arctic Slope	ANAKTUVUK PASS CITY (ANV	57
9	Arctic Slope	POINT HOPE CITY (ANV)	43
10	Bering Sts	SHAKTOOLIK CITY (ANV)	37
11	Bering Sts	KOYUK CITY (ANV)	39
12	Bering Sts	STEBBINS CITY (ANV)	49
13	Bristol Bay	CHIGNIK LAGOON (CDP) (AN	15
14	Bristol Bay	EGEGIK (CDP) (ANV)	20
15	Bristol Bay	SOUTH NAKNEK	28
16	Calista	SHELDON POINT CITY (ANV)	22
17	Calista	MEKORYUK CITY (ANV)	38
18	Calista	KONGIGANAK (CDP) (ANV)	31
19	Calista	KWETHLUK CITY (ANV)	59
20	Calista	EMMONAK CITY (ANV)	19
21	Calista	PITKAS POINT (CDP) (ANV)	21
22	Calista	NAPASKIAK CITY (ANV)	19
23	Chugach	TATITLEK (CDP) (ANV)	29
24	Chugach	ENGLISH BAY (CDP) (ANV)	28
25	Chugach	CORDOVA CITY	60
26	Cook Inlet	TYONEK (CDP) (ANV)	37
27	Cook Inlet	COOPER LANDING (CDP)	33
28	Cook Inlet	KASILOF (CDP)	60
29	Cook Inlet	PALMER CITY	90
30	Doyon	DOT LAKE (CDP) (ANV)	15
31	Doyon	KOYUKUK CITY (ANV)	40
32	Doyon	EAGLE CITY (ANV)	39
33	Doyon	GALENA CITY (ANV)	61
34	Koniag	KARLUK (CDP) (ANV)	16
35	Koniag	LARSEN BAY CITY (ANV)	55
36	Koniag	OLD HARBOR CITY (ANV)	43
37	NANA	DEERING CITY (ANV)	24
38	NANA	NOATAK (CDP) (ANV)	40
39	NANA	SELAWIK CITY (ANV)	49
40	Sealaska	KLUKWAN (CDP)	22
41	Sealaska	ANGOON CITY (ANV)	60
42	Sealaska	WRANGELL CITY	59
TOTAL			1,549

STUDY RESULTS

RESULTS AND SUMMARIES TABLES

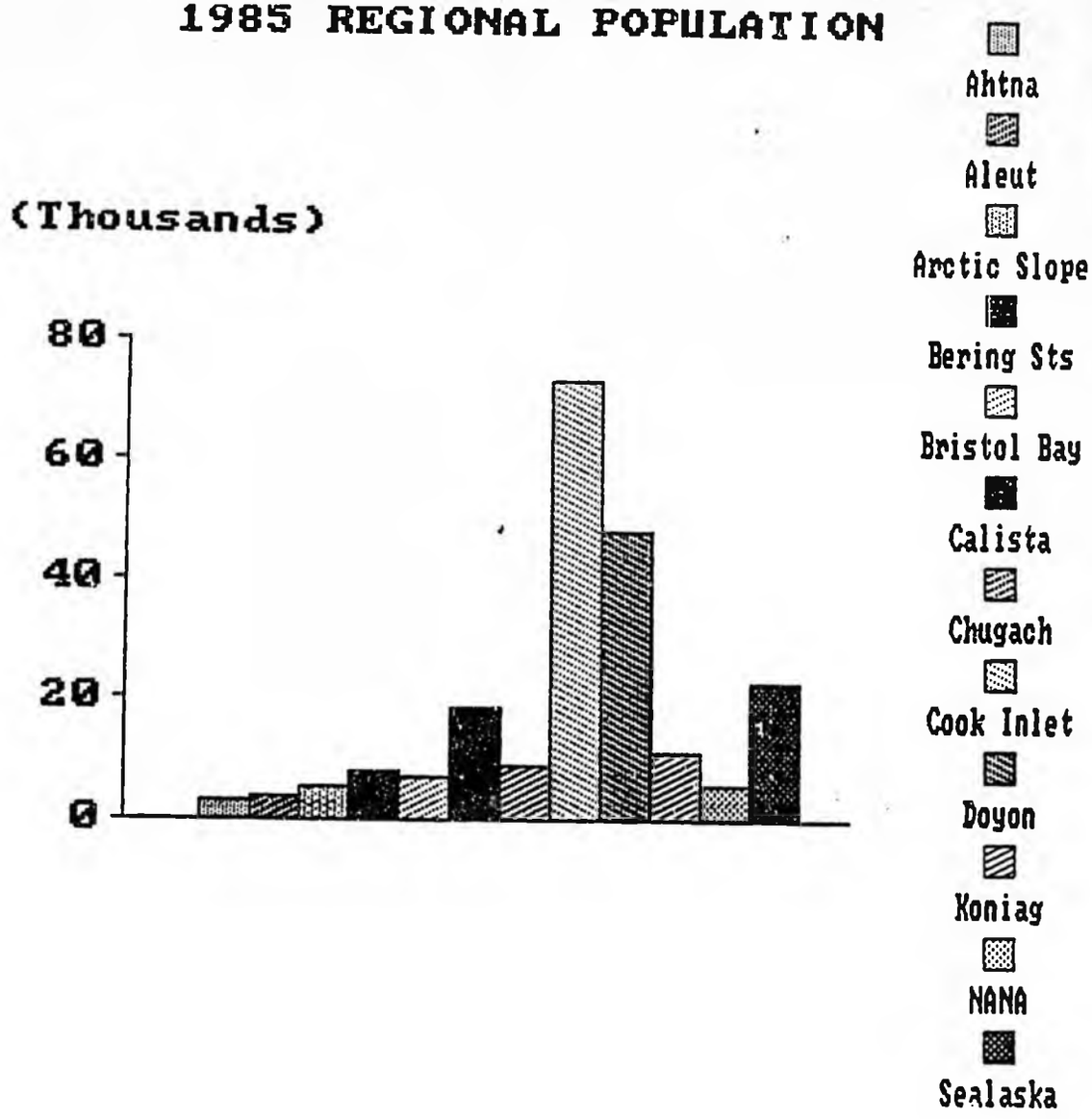
The following table shows a profile of housing regions addressed by this study. Specifically excluded were: the Municipality of Anchorage, the City of Fairbanks, the City of Juneau, the City of Sitka, the City of Ketchikan and all military bases. Population was divided by survey household size data to estimate the total number of households per region. The number of households is used in several of the following tables.

REGIONAL PROFILES

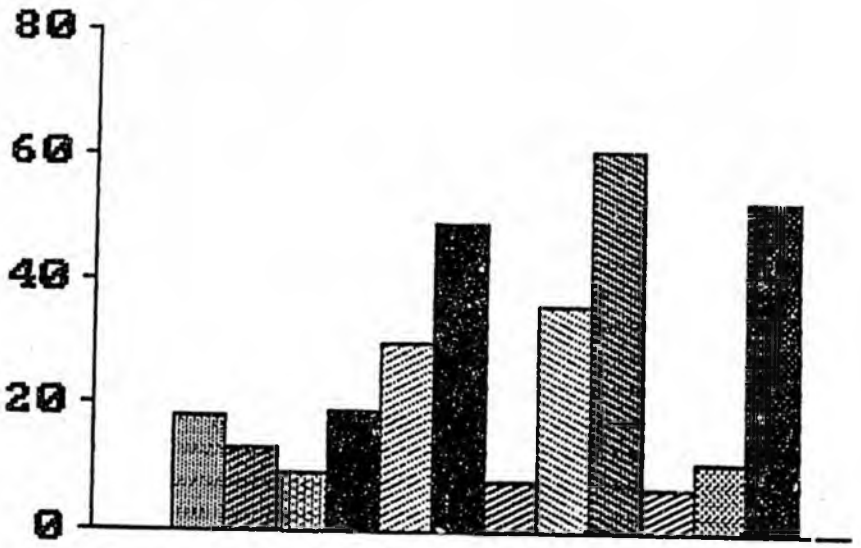
	1985 Population	Percent of Population	Number of Communities	Number of Households
Ahtna	3,034	1.4%	18	1,167
Aleut	3,783	1.8%	13	1,401
Arctic Slope	5,389	2.5%	9	1,225
Bering Sts	7,770	3.6%	19	1,646
Bristol Bay	7,033	3.3%	30	2,164
Calista	18,473	8.6%	49	4,078
Chugach	8,916	4.1%	8	2,630
Cook Inlet	73,142	34.0%	36	24,060
Doyon	47,849	22.3%	61	15,688
Koniag	11,221	5.2%	7	3,134
NANA	5,790	2.7%	11	1,129
Sealaska	22,479	10.5%	53	6,075
TOTAL	214,879	100.0%	314	64,397

The three most heavily populated regions are Cook Inlet, Doyon, and Sealaska. The three regions with the most communities, excluding the five above-mentioned cities, are Doyon, Sealaska, and Calista. Bristol Bay, Calista, and Sealaska regions have large numbers of communities with small percentages of the total population. This suggests a wider distribution of fewer homes per community which may have implications on fixed costs such as transportation.

1985 REGIONAL POPULATION



NO. COMMUNITIES PER REGION



Ahtna
Aleut
Arctic Slope
Bering Sts
Bristol Bay
Calista
Chugach
Cook Inlet
Doyon
Koniag
NANA
Sealaska

LIVING SPACE

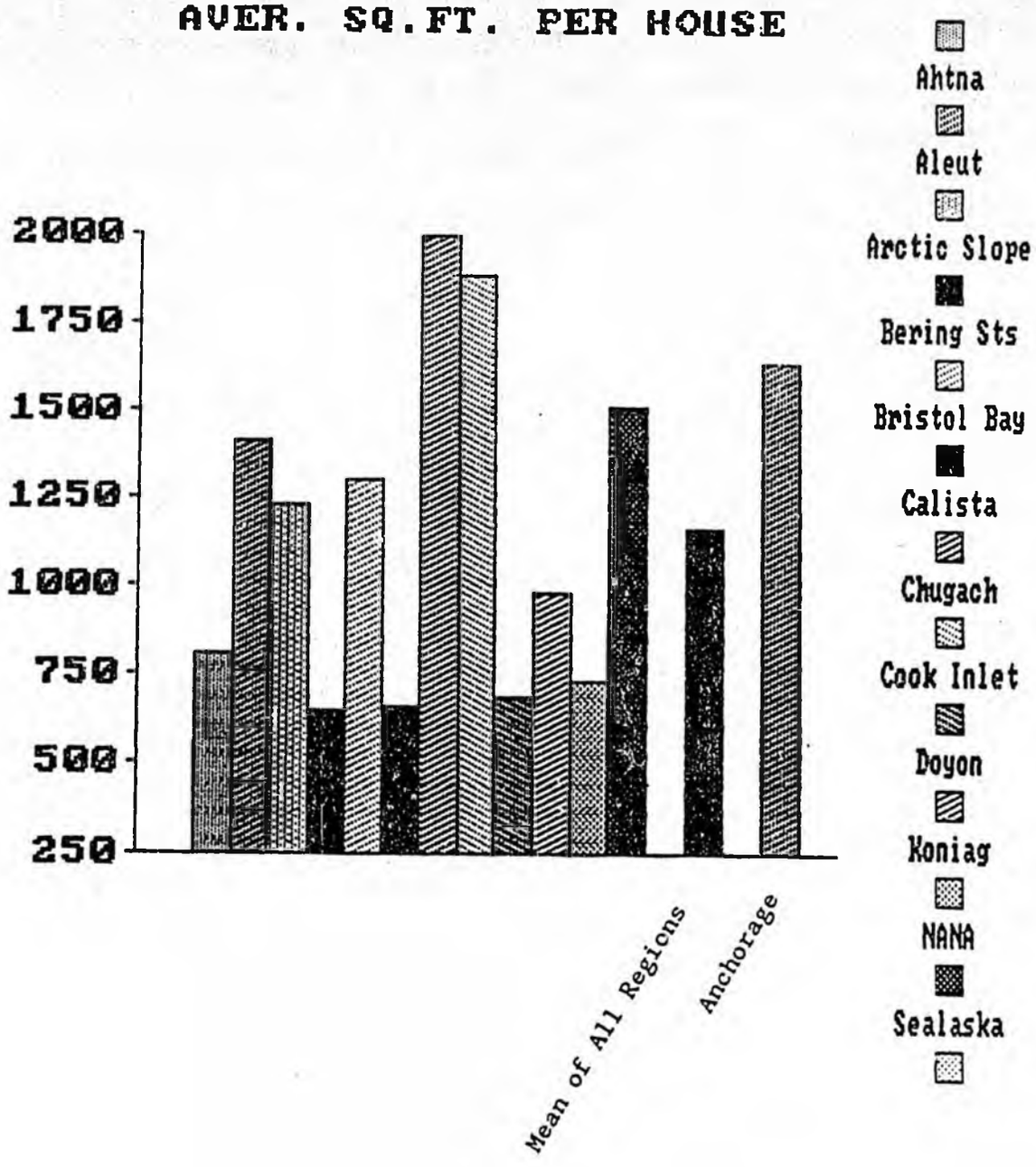
The following table illustrates the average amount of living space per resident. It was derived from the survey results. This information should be contrasted with Anchorage which has an average square footage of approximately 1,635 square feet for family residences. *With an average household size of 2.72, Anchorage households have an average of 600 square feet per resident. (Source: MOA Property Appraisal Office)*

AVERAGE SQUARE FEET PER RESIDENT

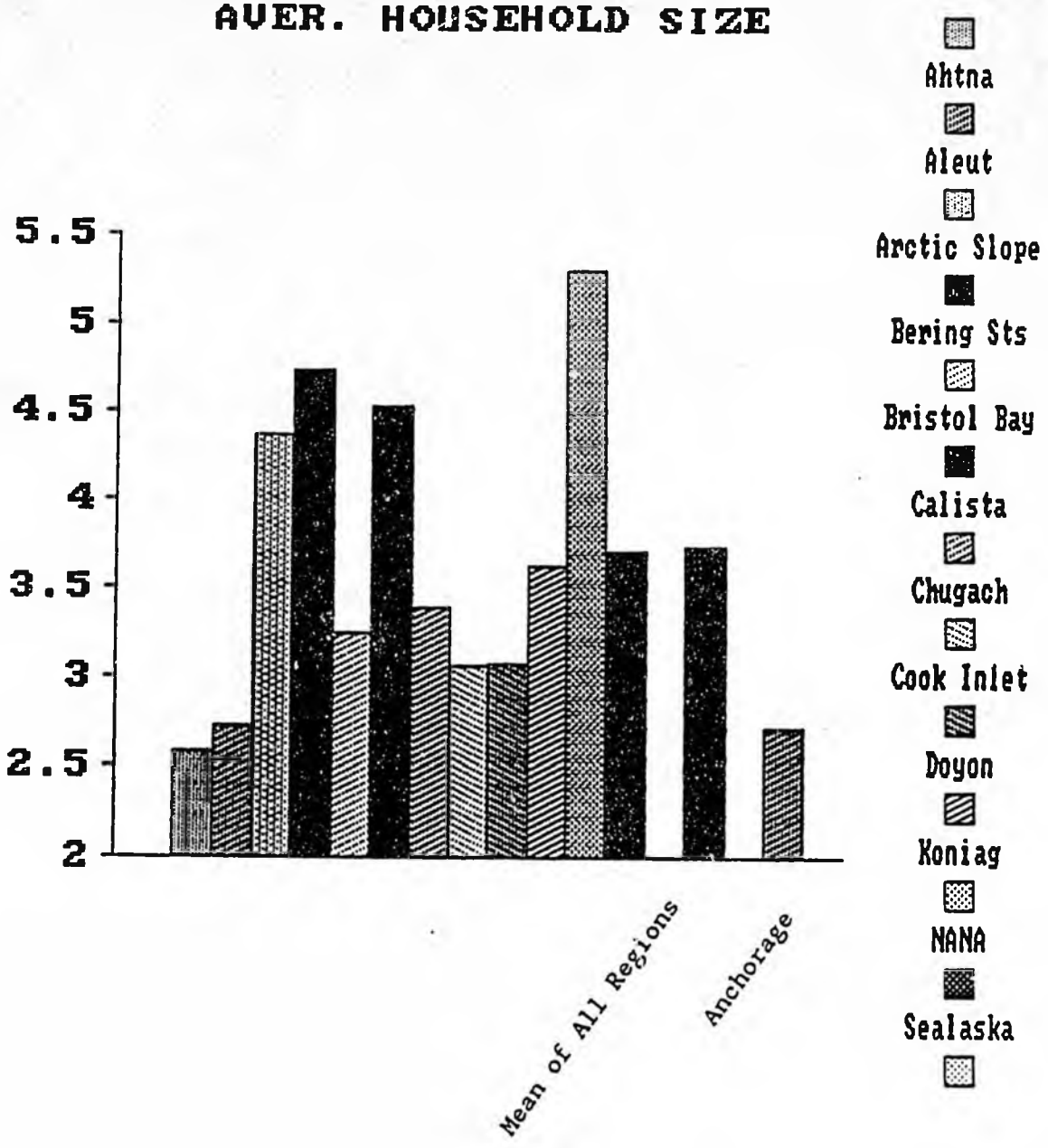
Region	Avg SqFt Per House	Avg # Res/HH	Average SqFt/Res
Bering Sts	650	4.7	137
NANA	731	5.3	138
Calista	661	4.5	146
Doyon	686	3.1	223
Koniag	982	3.6	271
Arctic Slope	1,229	4.4	281
Ahtna	808	2.6	312
Bristol Bay	1,303	3.3	401
Sealaska	1,509	3.7	408
Aleut	1,411	2.7	517
Chugach	1,996	3.4	589
Cook Inlet	1,885	3.1	616
TOTAL	1,162	3.7	33.
Anchorage	1,635	2.72	600

The average square footage per resident was smallest for the Bering Straits, NANA, and Calista regions. In the Bering Straits region, the average resident lived in 137 square feet of space; in Calista, the average resident lived in 138 square feet of space; and in NANA, the average person lived in 146 square feet of space. Six regions of the twelve (Bering Straits, NANA, Calista, Doyon, Koniag, and Arctic Slope) have an average square footage per resident less than 300. Only Cook Inlet region had an average greater than Anchorage.

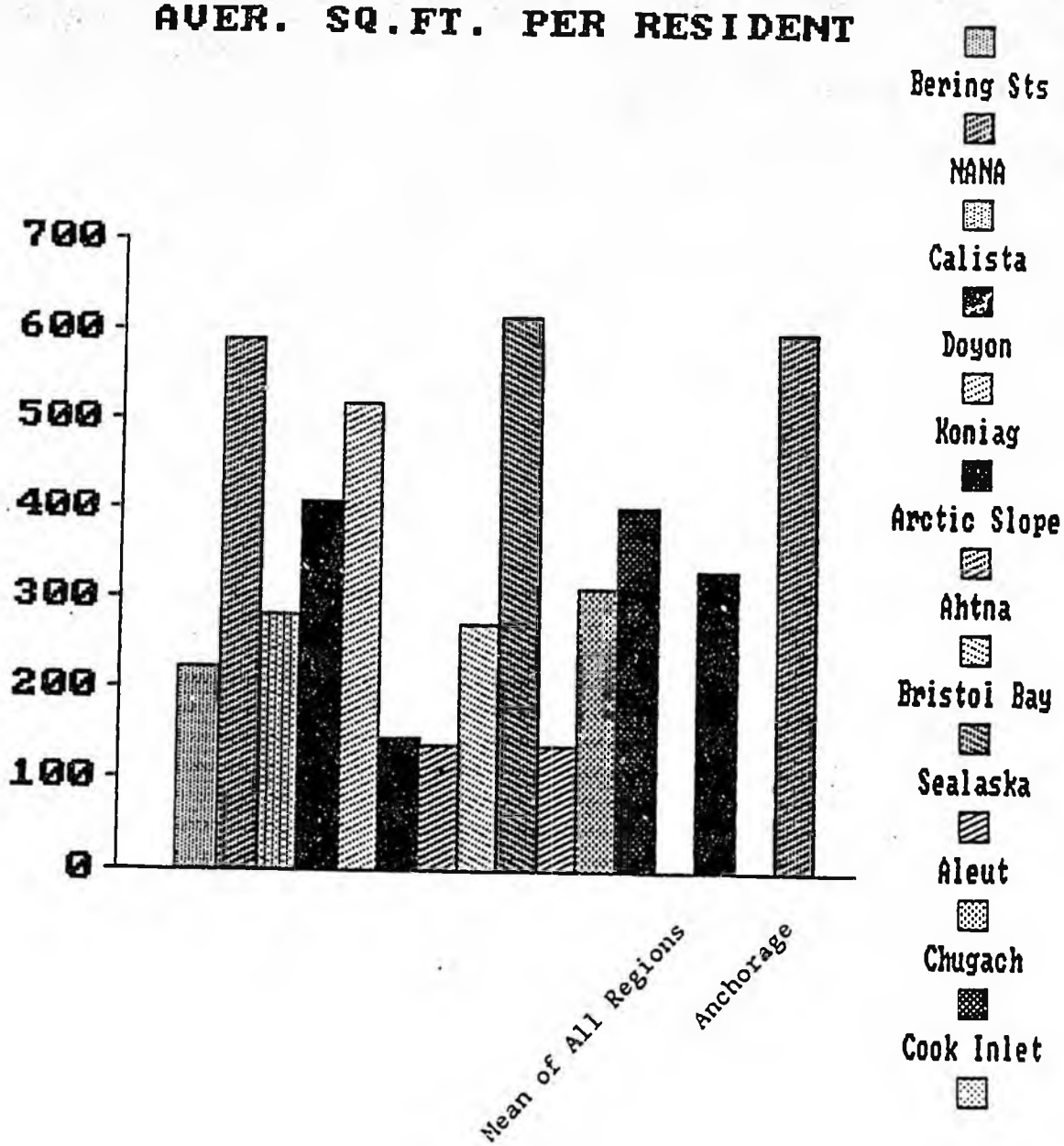
AVER. SQ.FT. PER HOUSE



AVER. HOUSEHOLD SIZE



AVER. SQ.FT. PER RESIDENT



GENERATIONS PER HOUSEHOLD

The following table shows the estimated number of family generations per household by region. An example of a three generation family would be grandmother, mother, daughter. A household with mother, mother's sister, and daughter would be considered a two-generation and not a three-generation family. This is another important way of considering the available living space and housing needs and may have an effect on housing programs in terms of whether three or four generation households prefer new homes or additions to their homes. This report presents housing needs based on an assumption that 100% of these three and four generation households require additional housing for each added generation. This may or may not be the real world case. Any alternative proportion of need in this category can be readily calculated as the reader may require.

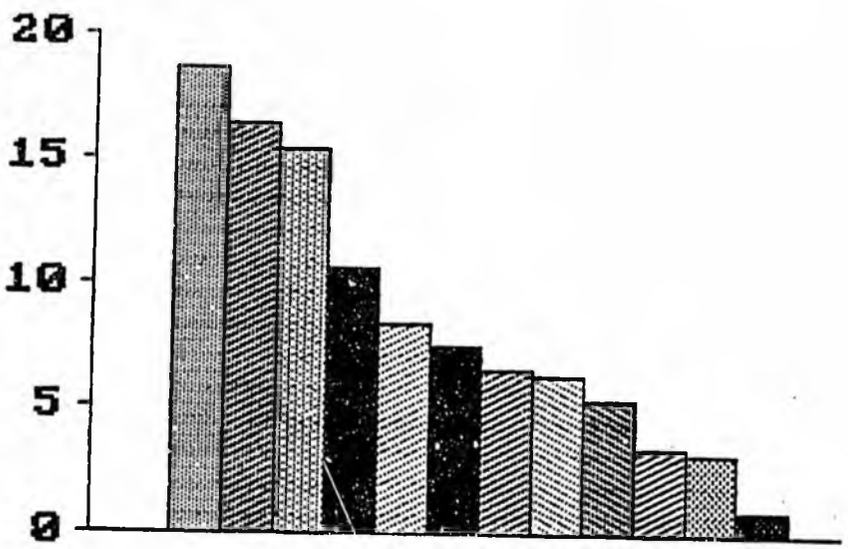
NUMBER OF GENERATIONS PER HOUSEHOLD

	Avg # Res/HH	Avg # Gener/HH	% HH with 3 or more Generations	# HH with * 3 or more Generations
Arctic Slope	4.4	2.1	18.7%	229
Calista	4.5	1.9	16.4%	669
NANA	5.3	1.9	15.4%	174
Bering Sts	4.7	1.9	10.6%	174
Ahtna	2.6	1.5	8.4%	98
Koniag	3.6	1.8	7.5%	235
Sealaska	3.7	1.8	6.5%	395
Bristol Bay	3.3	1.7	6.3%	136
Chugach	3.4	1.7	5.3%	139
Aleut	2.7	1.5	3.4%	48
Doyon	3.1	1.7	3.2%	502
Cook Inlet	3.1	1.7	.9%	217
TOTAL	3.7	1.8		3,016

The average number of generations per household was highest in Arctic Slope, Berings Straits, Calista, and NANA. Arctic Slope had the highest percent of households with three or more generations at 18.7%. Over 16% of Calista households had three or more generations followed by NANA at 15.4% and Bering Straits at 10.6%. The total number of households with three or more generations was over 3,000 or 5% of the total households.

*See Regional Profile for total number of households per region.

% HOUSEHOLDS W/ 3+ GENERATIONS



Arctic Slope

Calista

NANA

Bering Sts

Ahtna

Koniag

Sealaska

Bristol Bay

Chugach

Aleut

Doyon

Cook Inlet

NEW HOUSING STOCK REQUIRED BASED ON OVERCROWDING

One key indication of housing need is the amount of living space available per household resident. The following table summarizes the average or mean square footage per house. This was calculated using community-level population data from the Alaska state demographer's office and survey data acquired for this study. Population was divided by survey household size data to estimate the total number of households per region. Likewise, survey square footage data was applied to estimate average square feet per house by each region.

Living space would have been preferred over total square footage, but square footage was the only obtainable number.

Household Size:

Region	1985 Total Population	Number of Households	Average Sq. Feet Per House	#Res/HH Rank 1-highest	Avg. No. Residents per Household
Bering Sts	7,770	1,646	650	2	4.73
Calista	18,473	4,078	661	3	4.53
Doyon	47,849	15,688	686	9	3.07
NANA	5,790	1,129	731	1	5.30
Ahtna	3,034	1,167	808	12	2.59
Koniag	11,221	3,134	982	6	3.62
Arctic Slope	5,389	1,225	1,229	4	4.37
Bristol Bay	7,033	2,164	1,303	8	3.25
Aleut	3,783	1,401	1,411	11	2.73
Sealaska	22,479	6,075	1,509	5	3.70
Cook Inlet	73,142	24,060	1,885	10	3.06
Chugach	8,916	2,630	1,996	7	3.39
TOTAL	214,879	64,397	1,162		3.73

In the areas covered by this study, the average square footage per house ranged from 650 to 1,996, and the average number of household residents ranged from 2.59 to 5.30. However, the regions differed in rank for average number of household residents and average square footage per house.

The Doyon region had the smallest square footage per house, yet ranked third in residents per household. Bering Straits, Calista, Doyon and NANA ranked the lowest four in average square footage per house, but Bering Straits, Calista, and NANA were the regions with the three highest residents per household. This would imply that Calista, Bering Straits, and NANA have large households living in small houses. For example, in NANA, the average house had 5.3 people occupying 731 square feet of space.

COMPARISON OF LIVING SPACE

The following tables provide a breakdown by square footage per resident in percent of households. In the table below, for example, Ahtna has an estimated 1,167 households; 11% of Ahtna households have less than 100 square feet per resident; 22% of Ahtna households have less than 150 square feet; etc.

SQUARE FOOTAGE PER RESIDENT COMPARISONS
(Percent of Households)

Region	Estimated Total # House-holds	% HH less than -100 sf/res	% HH less than -150 sf/res	% HH less than -200 sf/res	% HH less than -250 sf/res	% HH less than -300 sf/res	% HH greater than -300 sf/res
Ahtna	1,167	11%	22%	36%	36%	49%	51%
Aleut	1,401	5%	7%	14%	20%	26%	74%
Arctic Slope	1,225	8%	18%	38%	48%	58%	43%
Bering Sts	1,646	0%	67%	67%	67%	67%	33%
Bristol Bay	2,164	0%	5%	21%	39%	47%	53%
Calista	4,078	28%	49%	68%	80%	81%	20%
Chugach	2,630	0%	10%	23%	30%	45%	55%
Cook Inlet	24,060	1%	2%	5%	10%	12%	88%
Doyon	15,688	13%	32%	51%	60%	72%	28%
Koniag	3,134	2%	14%	34%	44%	59%	41%
NANA	1,129	29%	52%	75%	83%	87%	14%
Sealaska	6,075	5%	13%	26%	35%	41%	59%
TOTAL	64,397						

In Calista and NANA, about 30% of the households had 100 or fewer square feet per resident which is equivalent to a 10 x 10 foot room. More than one-third of the residents in seven regions (Ahtna, Arctic Slope, Bering Straits, Calista, Doyon, Koniag, and NANA) were living in 200 square feet or less, which is equivalent to a 10 x 20 foot room. 48% or more of the residents in five regions (Arctic Slope, Bering Straits, Calista, Doyon, and NANA) were living in 250 square feet or less, which is equivalent to a 10 x 25 foot room. 80% of the residents in the Calista and NANA regions, were living in 250 square feet or less.

NUMBER OF HOUSEHOLDS

This next table provides the same information as the previous one reported by the estimated number of households rather than percentages.

SQUARE FOOTAGE PER RESIDENT COMPARISONS
(Number of Households)

Region	Estimated Total # House-holds	# HH less than -100 sf/res	# HH less than -150 sf/res	# HH less than -200 sf/res	# HH less than -250 sf/res	# HH less than -300 sf/res	# HH greater than -300 sf/res
Ahtna	1,167	127	254	425	425	573	594
Aleut	1,401	67	94	189	283	364	1,037
Arctic Slope	1,225	100	218	470	587	704	521
Bering Sts	1,646	0	1,098	1,098	1,098	1,098	548
Bristol Bay	2,164	115	457	835	1,026	1,026	1,138
Calista	4,078	1,146	2,006	2,773	3,250	3,283	795
Chugach	2,630	5	263	605	789	1,184	1,447
Cook Inlet	24,060	192	553	1,275	2,358	2,887	21,173
Doyon	15,688	2,024	5,083	8,017	9,366	11,280	4,408
Koniag	3,134	53	426	1,062	1,382	1,858	1,276
NANA	1,129	330	589	847	940	977	152
Sealaska	6,075	298	796	1,592	2,138	2,491	3,584
TOTAL	64,397	4,458	11,838	19,188	23,642	27,724	36,673

The total number of households with 200 sq.ft. per resident or less was 19,188. Doyon alone accounted for over 8,000 of those households or 42%. Over 23,000 households had 250 sq.ft. per resident or less, which represents an increase of about 4,500 homes from 200 sq.ft. or less.

HOUSING PHYSICAL CONDITION BASED ON INSULATION

In the following table, percentages of houses with attics and walls of different R-values are listed by region. R-values refer to the level of insulation. One inch of batt insulation is approximately equal to R-3. For example, R-38 is equivalent to 12 inches of batt, and R-19 is equivalent to 6 inches of batting.

Insulation Levels in Percentages:

	Attic					Walls		Can't Maint
	R<R11	R<R19	R<R22	R<R30	R<R38	R<R11	R<R19	70 deg F
Ahtna	15%	51%	78%	80%	96%	22%	69%	56%
Aleut	23%	36%	50%	65%	76%	23%	45%	16%
Arctic Slope	0%	6%	19%	36%	56%	1%	18%	37%
Bering Sts	14%	29%	89%	94%	97%	11%	41%	67%
Bristol Bay	14%	39%	76%	78%	90%	19%	52%	22%
Calista	3%	34%	68%	77%	77%	11%	78%	41%
Chugach	16%	26%	47%	56%	71%	20%	52%	15%
Cook Inlet	7%	22%	52%	71%	77%	10%	62%	12%
Doyon	4%	18%	47%	74%	79%	11%	65%	40%
Koniag	2%	11%	17%	18%	20%	3%	63%	27%
NANA	25%	25%	50%	50%	50%	1%	26%	72%
Sealaska	12%	55%	93%	95%	97%	15%	81%	41%
TOTAL	9%	29%	58%	69%	76%	12%	57%	36%

According to the 1986 Energy Conservation Standard For New Residential Buildings published by the State DCRA Office of Energy Programs, the minimum prescribed insulation requirement for ceilings is R-38, except in Arctic Slope where the ceiling requirement is R-52. The minimum prescribed insulation requirements for walls are R-21 in Sealaska; R-18 in Aleut, Chugach, Cook Inlet, and Koniag; R-25 in Ahtna, Bristol Bay, Calista, and Doyon; R-30 in Bering Straits and NANA; and R-35 in Arctic Slope.

Houses with attic R-values less than R-38 range from 71% to 97% in nine of the regions, and more than half of the houses in two more regions. Houses with wall R-values less than R-19 range from 41% to 81% in all but two region.

(The heating sources per region do not sum to 100% because many households used more than one heating source.)

Heating Sources in Percents:

	Wood Stove	Oil Pot	Oil Furnace	Natural Propane	Natural Gas	Electric	Other
Ahtna	77%	17%	41%	1%	0%	1%	1%
Aleut	33%	8%	59%	2%	0%	15%	26%
Arctic Slope	27%	12%	55%	1%	0%*	0%	33%
Bering Sts	83%	40%	19%	50%	0%	12%	2%
Bristol Bay	21%	54%	41%	10%	0%	8%	11%
Calista	56%	72%	15%	13%	0%	9%	1%
Chugach	69%	26%	43%	0%	0%	5%	1%
Cook Inlet	54%	0%	16%	5%	25%	32%	3%
Doyon	92%	8%	10%	0%	0%	0%	0%
Koniag	66%	36%	42%	1%	0%	0%	15%
NANA	70%	30%	32%	0%	0%	0%	22%
Sealaska	65%	23%	47%	1%	0%	1%	1%

* Note: Arctic Slope region includes Barrow/Browerville which primarily uses natural gas as a heating source. This is not reflected in the table because Barrow was not surveyed.

The primary heating source in Ahtna, Chugach, Cook Inlet, Doyon, Koniag, NANA, and Sealaska was wood stoves. The primary heating source in Aleut and Arctic Slope was oil furnaces, and oil pot burners in Bristol Bay and Calista regions.

The following table indicates condition based on current survey assessment. For example, in Ahtna, 65% of the windows were like new; 12% of the plumbing required major repairs; and 35% of the windows required replacement.

Physical Condition of Housing Structures in Percentages:

	Like New/Minor Repair					Major Repair			Replace				
	Win	Dor	Plb	Fnd	Hm	Plb	Fnd	Hm	Win	Dor	Plb	Fnd	Hm
Ahtna	65%	62%	32%	57%	37%	12%	10%	43%	35%	38%	57%	33%	21%
Aleut	72%	72%	79%	79%	76%	12%	14%	14%	28%	28%	9%	7%	10%
Arctic Slope	53%	58%	78%	66%	59%	6%	20%	36%	47%	42%	16%	14%	5%
Bering Sts	45%	59%	28%	90%	100%	0%	0%	0%	55%	42%	72%	10%	0%
Bristol Bay	54%	56%	54%	51%	37%	22%	43%	57%	46%	44%	24%	7%	7%
Calista	67%	74%	5%	59%	71%	0%	27%	26%	33%	26%	95%	15%	3%
Chugach	80%	84%	89%	89%	79%	9%	9%	16%	20%	16%	3%	2%	5%
Cook Inlet	91%	94%	95%	99%	94%	1%	1%	6%	9%	6%	3%	0%	0%
Doyon	54%	58%	29%	60%	54%	3%	13%	30%	46%	42%	69%	27%	17%
Koniag	85%	87%	90%	93%	91%	8%	5%	8%	15%	13%	3%	2%	1%
NANA	53%	53%	52%	53%	53%	37%	37%	37%	47%	47%	12%	10%	10%
Sealaska	91%	88%	91%	84%	75%	8%	16%	24%	9%	12%	1%	1%	1%
TOTAL	70%	74%	61%	77%	73%	7%	14%	21%	30%	26%	32%	10%	6%

Trained interviewers rated the windows (Win), doors (Dor), plumbing (Plb), foundation (Fnd), and overall home condition (Hm) for every house as needing minor repair, major repair, or replacement.

Since weatherization contractors normally repair windows first, the window conditions of houses was an important factor. 33% to 55% of the windows in Ahtna, Arctic Slope, Berings Straits, Bristol Bay, Calista, Doyon, and NANA needed to be replaced. 38% to 47% of the doors needed to be replaced in Ahtna, Arctic Slope, Bering Straits, Bristol Bay, Doyon, and NANA. 95% of the plumbing in houses in Calista needed to be replaced, 72% in Bering Straits, 69% in Doyon, and 57% in Ahtna. 40% to 50% of the foundations needed major repair or replacement in Ahtna, Bristol Bay, Calista, Doyon, and NANA. 21% of Ahtna's houses were rated as needing replacement and 17% of Doyon's houses. 57% of houses in Bristol Bay needed major repair, 43% in Ahtna, 37% in NANA, and 36% in Arctic Slope.

HEALTH AND SAFETY RESULTS FROM STUDY SURVEY

Homes Meeting Selected Fire Codes:

	% Without Egress Window	% Without Smoke Detector
Ahtna	62%	64%
Aleut	53%	9%
Arctic Slope	35%	18%
Bering Sts	52%	28%
Bristol Bay	38%	10%
Calista	41%	51%
Chugach	14%	18%
Cook Inlet	31%	19%
Doyon	53%	32%
Koniag	6%	20%
NANA	49%	25%
Sealaska	26%	31%
SURVEY-WIDE TOTAL	38%	28%

(An egress window is defined as a sufficiently large enough window for residents to crawl through in case of fire or other emergencies according the Uniform Fire Code.)

50% or more of the homes in Ahtna, Aleut, Bering Straits, Doyon, and NANA (49%) did **not** have an egress window. A common problem with egress windows was that they freeze shut during the winter months.

Smoke detectors were **not** present in half of the homes in Calista and 64% of the homes in Ahtna. One-third or fewer of the homes in other regions did **not** have smoke detectors. Although a home may have a smoke detector, it is common practice for residents to remove the batteries to operate other equipment.

Utility Status:

	Without Running Water	Without Sewer System
Ahtna	61%	56%
Aleut	4%	5%
Arctic Slope	22%	98%
Bering Sts	78%	78%
Bristol Bay	30%	25%
Calista	98%	97%
Chugach	3%	3%
Cook Inlet	6%	6%
Doyon	70%	70%
Koniag	4%	3%
NANA	72%	73%
Sealaska	3%	4%
SURVEY-WIDE TOTAL	39%	44%

For the purposes of this study, "sewer system" was defined as flushable toilets, and "running water" was defined as suitable drinking water piped, hauled or pumped into the house. It is important to note that some communities have sewer systems, and no running water because the water is not drinkable.

REGIONAL HOUSING STOCK SUMMARY

Home Owner:

	% Self	% Relative	% Other
Ahtna	97%	3%	0%
Aleut	42%	4%	54%
Arctic Slope	77%	13%	10%
Bering Sts	77%	5%	18%
Bristol Bay	86%	7%	8%
Calista	87%	6%	6%
Chugach	82%	2%	17%
Cook Inlet	83%	1%	16%
Doyon	87%	1%	12%
Koniag	63%	36%	1%
NANA	80%	16%	4%
Sealaska	76%	5%	19%
TOTAL	78%	5%	17%

Other home owners include HUD, various state agencies, etc. 54% of the houses in Aleut were not owned by the resident or a relative. 63% to 97% of the houses in all regions were built by the resident. A relative of the resident built 36% of the houses in Koniag, 16% in NANA, and 13% in Arctic Slope.

Home Builder:

	% Self	% HUD	% BIA	% Contractor	% Other
Ahtna	39%	14%	19%	0%	29%
Aleut	26%	23%	0%	3%	47%
Arctic Slope	10%	3%	1%	7%	79%
Bering Sts	27%	10%	23%	0%	39%
Bristol Bay	32%	32%	0%	13%	22%
Calista	45%	9%	4%	1%	41%
Chugach	12%	30%	9%	8%	41%
Cook Inlet	32%	1%	0%	37%	30%
Doyon	46%	15%	17%	2%	20%
Koniag	25%	56%	13%	0%	5%
NANA	15%	49%	1%	11%	21%
Sealaska	29%	13%	6%	1%	51%
TOTAL	30%	19%	8%	8%	36%

Other possible builders are different state agencies and contractors outside of Alaska. 25% to 46% of the houses were built by the home owner in nine of the regions (Ahtna, Aleut, Bering Straits, Bristol Bay, Calista, Cook Inlet, Doyon, Koniag, and Sealaska). About 45% of the houses in Calista and Doyon were built by the home owner.

Power Source in Percent of Households:

	Electric Utility	Home Generator	Other	None
Ahtna	80%	3%	3%	14%
Aleut	96%	4%	0%	0%
Arctic Slope	100%	0%	0%	0%
Bering Sts	97%	2%	1%	1%
Bristol Bay	75%	24%	2%	0%
Calista	99%	1%	0%	1%
Chugach	100%	0%	0%	0%
Cook Inlet	98%	2%	0%	1%
Doyon	93%	1%	1%	6%
Koniag	99%	0%	0%	1%
NANA	100%	0%	0%	0%
Sealaska	95%	5%	0%	0%

14% of households in Ahtna and 6% in Doyon **do not** have a power source. 100% of the homes surveyed in Arctic Slope, Chugach, and NANA had an electric utility hookup. Almost one-fourth of the homes in Bristol Bay region used a home generator.

NEED BASED ON HOUSING STOCK CONDITION AND AGE

The following table shows the approximate age of existing housing stock based on project survey data broken down by region. For example, in the Ahtna region, approximately 16.9% of the houses were under 6 years old, while 41.5% were 11 to 20 years.

Age of Housing Stock:

	% Houses 0-5 Yrs	% Houses 6-10 Yrs	% Houses 11-20 Yrs	% Houses 21-30 Yrs	% Houses 31 or More
Ahtna	16.9%	4.6%	41.5%	6.2%	30.8%
Aleut	12.9%	38.8%	23.5%	15.3%	9.4%
Arctic Slope	23.9%	54.4%	14.1%	5.4%	1.1%
Bering Sts	9.2%	19.2%	53.3%	9.2%	9.2%
Bristol Bay	13.6%	18.6%	30.5%	10.2%	27.1%
Calista	19.4%	18.9%	38.3%	17.9%	5.6%
Chugach	19.8%	30.6%	20.7%	15.3%	13.5%
Cook Inlet	25.7%	22.8%	21.4%	19.4%	10.7%
Doyon	19.5%	20.8%	34.9%	8.7%	16.1%
Koniag	14.7%	23.2%	41.1%	16.8%	4.2%
NANA	10.1%	33.7%	42.7%	6.7%	6.7%
Sealaska	8.7%	12.7%	31.0%	14.3%	33.3%

The older houses tended to be found in Ahtna, Bristol Bay, and Sealaska: 27% to 33% of the houses were 31 years old or more. 47.6% of the houses in Sealaska were 21 years or older. More than half of the houses in the Aleut, Arctic Slope, and Chugach regions were newer houses, only 10 years old or less.

The following table shows the size of houses by square footage category and broken down by region. For example, 11% of Ahnta houses are 300 square feet or less and 68% (11+13+44=68%) are 750 square feet or less.

Square Footage of Houses in Percentages:

	300 or less	301 to 500	501 to 750	751 to 1000	1001 to 2000	2001 or more
Ahtna	11%	13%	44%	7%	18%	7%
Aleut	5%	14%	4%	14%	42%	21%
Arctic Slope	1%	10%	8%	26%	45%	10%
Bering Sts	0%	0%	0%	33%	33%	33%
Bristol Bay	2%	7%	14%	35%	23%	19%
Calista	9%	32%	27%	16%	15%	2%
Chugach	2%	6%	16%	27%	24%	26%
Cook Inlet	1%	4%	2%	8%	40%	45%
Doyon	13%	32%	17%	27%	7%	4%
Koniag	0%	3%	5%	56%	31%	5%
NANA	3%	17%	15%	63%	2%	1%
Sealaska	3%	6%	8%	21%	41%	21%
TOTAL	5%	14%	14%	26%	26%	16%

Ahtna and Doyon have the highest percent of houses only 300 sq.ft. or less. Almost half of Ahtna houses are 501 to 750 sq.ft., and over half of Koniag houses are 751 to 1000 square feet. 40% to 45% of Aleut, Arctic Slope, Cook Inlet, and Sealaska houses are 1001 to 2000 sq.ft.

NEW HOUSING STOCK NEEDED - SUMMARY

The following table consolidates major study findings by number of houses needing replacement, number with 3 or more generations per households, total estimated new housing needed, and approximate cost based on an average of $116,000 to build a new house in non-urban Alaska.

NEW HOUSING STOCK NEEDED TO REPLACE HOMES IN POOR CONDITION
AND
TO PROVIDE HOMES FOR THIRD AND FOURTH GENERATIONS

	Estimated Total # HH	# HH Rated Replace	# HH w/ 3+ Gener	TOTAL NEW HOUSING NEEDED	COST @ $116k per New House (000's)
Ahtna	1,167	245	98	343	$39,799
Aleut	1,401	140	48	188	$21,777
Arctic Slope	1,225	61	229	290	$33,678
Bering Sts	1,646	0	174	174	$20,239
Bristol Bay	2,164	151	136	288	$33,386
Calista	4,078	122	669	791	$91,771
Chugach	2,630	132	139	271	$31,423
Cook Inlet	24,060	0	217	217	$25,119
Doyon	15,688	2,667	502	3,169	$367,601
Koniag	3,134	31	235	266	$30,901
NANA	1,129	113	174	287	$33,265
Sealaska	6,075	61	395	456	$52,853
TOTAL	64,397	3,724	3,016	6,740	$781,813

The column headed "# HH Rated Replace" refers to the number of houses that were rated on the survey as needing replacement. "# HH w/3+ Gener" refers to the number of households with three or more generations. And "Total New Housing Needed" represents the sum of the previous two columns.

The 6,740 total new houses needed represents all of those existing houses which must be replaced plus the number of houses needed to provide a third (or fourth) generation with their own house.

The total cost to build the 6,740 houses would be $781,813,000. The $116,000 cost per house was derived from the current average cost to build the average 1200 sq.ft. new house in rural Alaska:

$92,200	HUD current contribution
$18,440	State of Alaska current contribution
$ 5,000	Cost to achieve new Thermal and Lighting Standards
$115,640	Total Cost under current practices *

* Note: Additional costs can be incurred for water and sewer system hookups. PHS will currently cover these costs up to $25,000 (within and up to certain amounts authorized by Congress for Alaska).

These costs were based on a project of new homes being built, not a single house built in a single community.

There were households who had a home but were not living in it during the winter either because the home was not in suitable living condition or they could not afford to heat it. In the forty-four communities surveyed, there were 88 people (or 49 households) who were living with other households for these reasons. This represents 3.2% of the total households surveyed.

INTRODUCTION TO OVERCROWDING CONDITIONS AND ISSUES

According to the 1985 edition of Dwelling Construction Under The Uniform Building Code,

> *The UBC model codes for residential occupancies states a minimum residential room size of 120 sq.ft. per living room, 150 sq.ft. per living and sleeping room, 90 sq. ft. per bedroom, and 220 sq.ft. (plus 100 sq.ft. for each occupant over 2) per efficiency or bachelor apartment.*
>
> *The codes states for room dimensions that "...one room shall have not less than 120 square feet of floor area. Other inhabitable rooms...shall have an area of not less than 70 square feet."*

For the purposes of comparison, no assumptions were made about any one standard square footage per resident. Instead, three scenarios are presented to most accurately describe the current housing situation: 200 sq. ft. or less per resident; 250 sq. ft. or less per resident; and 300 sq. ft. or less per resident. Each of the following three tables portray one of these scenarios.

NEW HOUSING STOCK NEEDED TO REMEDY OVERCROWDING FOR HOUSEHOLDS WITH 200 OR FEWER SQ.FT. PER RESIDENT

	1	*2*	*3*	*4*	*5*	*6*	*7*
	Estimated Total # HH	# HH <200 sf/res	# HH add-on 320sf	COST @ $15k per Household (000'S)	# HH New Hm Needed	COST @ $116k per New House (000'S)	TOTAL COST (000'S)
Ahtna	1,167	425	376	$5,636	49	$5,719	$11,354
Aleut	1,401	189	182	$2,730	7	$811	$3,541
Arctic Slope	1,225	470	407	$6,098	63	$7,360	$13,458
Bering Sts	1,646	1,098	553	$8,301	545	$63,175	$71,475
Bristol Bay	2,164	835	808	$12,124	27	$3,100	$15,224
Calista	4,078	2,773	1,570	$23,543	1,203	$139,604	$163,147
Chugach	2,630	605	553	$8,295	52	$6,035	$14,330
Cook Inlet	24,060	1,275	1,215	$18,226	60	$6,951	$25,177
Doyon	15,688	8,017	6,606	$99,090	1,411	$163,675	$262,765
Koniag	3,134	1,062	957	$14,353	105	$12,196	$26,549
NANA	1,129	847	440	$6,594	407	$47,259	$53,853
Sealaska	6,075	1,592	1,422	$21,325	170	$19,760	$41,085
TOTAL	64,397	19,188	15,088	$226,314	4,100	$475,645	$701,959
						(LESS HOMES ALREADY REPLACED)....	$210,243
						TOTAL COST TO REMEDY OVERCROWDING....	**$491,717**

Column 1 shows the same housing estimates used in all tables. *Column 2* represents the number of households with 200 sq.ft. or less per resident. *Column 3* shows the number of households that would no longer have less than 200 sq.ft. per resident if a 320 sq.ft. addition were built onto the existing house. *Column* 4 is the total cost of building the additions at $15,000 per addition. The $15,000 cost is the current cost to build a 320 sq.ft. addition in rural Alaska based on the BIA Housing Improvement Program. *Column 5* shows the number of houses that would still have less than 200 sq.ft. per resident if 320 square feet were added. Since, in this case, the addition would not resolve the overcrowding for these households, a new house would be required.

Column 6 shows what the cost would be based on $116,000 per new house to accommodate the households identified in *column 5*. *Column 7* shows the total cost to remedy overcrowding in the 200 or less square footage per resident scenario: total cost combines the cost of additions *(column 4)* and the cost of new houses needed *(column 6)*.

The table shows a total cost for all regions equals $701,959,000.

New houses already accounted for by virtue of being rated "replace" were subtracted, leaving a net cost of $491,717,000.

Building a new house for the third (or fourth) generation may alleviate overcrowded conditions, depending on the number of people in a generation. In the best case scenario, 3,016 homes (from the generation table) would no longer have overcrowded conditions if one generation moved out, and the total cost would decrease by $349,856,000. This would have the greatest impact on the Arctic Slope, Calista, NANA, and Bering Straits regions.

The assumption was made that if adding 320 square feet to a house did not solve the overcrowded conditions, building a new and larger home for the household would solve the problem. Again, there is a possibility that large families will still have 200 sq.ft. or less per resident even if part of the family stays in the original house and part of the family moves into the new house. This overlap may cause the total cost to be understated.

NEW HOUSING STOCK NEEDED TO REMEDY OVERCROWDING
FOR HOUSEHOLDS WITH 250 OR FEWER SQFT PER RESIDENT

	Estimated Total # HH	# HH <250 sf/res	# HH add-on 320sf	COST @ $15k per Household (000'S)	# HH New Hm Needed	COST @ $116k per New House (000'S)
Ahtna	1,167	425	333	$4,992	92	$10,698	$15,690
Aleut	1,401	283	265	$3,969	18	$2,134	$6,103
Arctic Slope	1,225	587	397	$5,952	190	$22,062	$28,014
Bering Sts	1,646	1,098	422	$6,324	676	$78,459	$84,783
Bristol Bay	2,164	1,026	943	$14,143	83	$9,640	$23,784
Calista	4,078	3,250	1,300	$19,500	1,950	$226,200	$245,700
Chugach	2,630	789	661	$9,918	128	$14,827	$24,745
Cook Inlet	24,060	2,358	2,193	$32,894	165	$19,147	$52,041
Doyon	15,688	9,366	6,425	$96,376	2,941	$341,147	$437,523
Koniag	3,134	1,382	1,078	$16,169	304	$35,269	$51,438
NANA	1,129	940	310	$4,653	630	$73,057	$77,710
Sealaska	6,075	2,138	1,747	$26,201	391	$45,385	$71,587
TOTAL	64,397	23,642	16,073	$241,092	7,569	$878,025	$1,119,117
					(LESS HOMES ALREADY REPLACED)...		$426,874
					TOTAL COST TO REMEDY OVERCROWDING		**$692,243**

NEW HOUSING STOCK NEEDED TO REMEDY OVERCROWDING FOR HOUSEHOLDS WITH 300 OR FEWER SQFT PER RESIDENT

	Estimated Total # HH	# HH <300 sf/res	# HH add-on 320sf	COST @ $15k per Household (000'S)	# HH New Hm Needed	COST @ $116k per New House (000'S)
Ahtna	1,167	573	415	$6,231	158	$18,279	$24,510
Aleut	1,401	364	327	$4,903	37	$4,307	$9,210
Arctic Slope	1,225	704	390	$5,850	314	$36,422	$42,272
Bering Sts	1,646	1,098	307	$4,612	791	$91,705	$96,317
Bristol Bay	2,164	1,026	844	$12,666	182	$21,066	$33,732
Calista	4,078	3,283	1,008	$15,118	2,275	$263,914	$279,032
Chugach	2,630	1,184	868	$13,018	316	$36,671	$49,689
Cook Inlet	24,060	2,887	2,520	$37,805	367	$42,531	$80,337
Doyon	15,688	11,280	5,674	$85,108	5,606	$650,315	$735,422
Koniag	3,134	1,858	1,163	$17,447	695	$80,607	$98,054
NANA	1,129	977	231	$3,459	746	$86,586	$90,044
Sealaska	6,075	2,491	1,731	$25,969	760	$88,132	$114,100
TOTAL	64,397	27,725	15,479	$232,185	12,246	$1,420,534	$1,652,719
					(LESS HOMES ALREADY REPLACED)...		$770,198
					TOTAL COST TO REMEDY OVERCROWDING		$882,521

MAJOR REPAIRS NEEDED

In addition to the need for new housing, there are houses in rural Alaska which require major repair. The following discussion describes the rehabilitation standards and costs involved for major repairs on a home in rural Alaska. The discussion is followed by a table which described the general need for major housing repairs.

REHABILITATION STANDARDS

MAJOR REPAIRS NOT INCLUDING FOUNDATION WORK $15,000*:

Replace all exterior doors with Metal Insulated R-16 pre-hung doors.

Insulate attic spaces, when possible, to a minimum of R-38.

Replace all windows with Alaska Window Vinyl Cased double pane Heat Mirror or Low e windows.

Insulate all exterior wall to a minimum of R-19.

Insulate all floors to a minimum of R-38 whenever possible.

Replace existing heating system with a high-efficiency outside air source, thermostatically controlled oil stove, or a high efficiency wood stove where appropriate.

Conduct a before and after computerized blower door test and an infrared thermography test.

Upgrade all interior wiring to National Electrical Code standards.

Insure the integrity of the ceiling and wall vapor barriers by installing new interior vapor barriers and ceiling and wall material.

Cover exterior of the house with Tyvek wrap and reside with appropriate siding to reduce wind driven air and moisture infiltration.

Repair flooring and recover with tile or carpet as necessary.

Replace all appliances with high energy efficient appliances.

Repair all interior doors, window sills, cabinets, and plumbing, as appropriate.

Repair and replace roof as necessary.

MAJOR REPAIRS INCLUDING FOUNDATION WORK $25,000*:

All of the above plus foundation work.

Raise the house off the existing pad and rebuild the foundation pad with gravel and insulation to cure permafrost problems.

Repair and/or replace existing deck framing to cure center sag and edge sag of floor joists.

Install new longitudinal beams for house support.

Install new foundation pads and new vertical foundation support posts.

Level house and brace foundation.

* These are all inclusive costs based upon current material bid costs, current barge and air freight rates, and the known costs associated with the Alaska Legal Services v. HUD rehabilitation settlement cost of the "HUD 500" homes presently being rehabilitated.

HOUSES NEEDING MAJOR REPAIR

	Estimated Number of Households	# HH Rated Maj Rep	# HH w/ attic R<R38	# HH w/ walls R<R19	# HH Can't Maintain 70 deg F
Ahtna	1,167	502	1,125	799	657
Aleut	1,401	196	1,062	626	226
Arctic Slope	1,225	441	690	224	453
Bering Sts	1,646	0	1,588	667	1,101
Bristol Bay	2,164	1,233	1,943	1,123	480
Calista	4,078	1,060	3,136	3,177	1,680
Chugach	2,630	421	1,875	1,375	402
Cook Inlet	24,060	1,444	18,454	14,941	2,887
Doyon	15,688	4,706	12,409	10,150	6,322
Koniag	3,134	251	627	1,962	831
NANA	1,129	418	565	288	814
Sealaska	6,075	1,458	5,887	4,890	2,491
TOTAL	64,397	12,130	49,361	40,223	18,345

The second column shows the number of households rated as needing major repair; the third column indicates the number of households with an attic R-value less than R-38, which is equivalent to 12 inches of fiberglass insulation; the fourth column indicates the number of households with less than R-19 walls, which is equivalent to 3.5 inches of fiberglass insulation; and the fifth column shows the number of households that indicated inability to maintain 70 degrees Fahrenheit in the coldest weather.

Since the households in each column could overlap with one another, the columns can not be totaled. The total number of households that are listed in one or more of these columns represent 66.4% of the total number of households, or 42,737 houses. The average cost to complete major repairs on a house is $25,000 (as described under rehabilitation standards), which would make the total cost of repairing houses, $1,068,433,000.

POPULATION AND HOUSING PROJECTIONS

The population projections over the next five years are included in the following table. However, housing needs can not simply be determined from population projection totals. For example, the percentage of people in different age groups play an important role. Since the population was relatively young in the areas included in this study, it is likely that their population will increase at a rapid rate.

Other important factors are the housing characteristics and economies of the communities included in the study. Although major population centers were excluded from the study, the Kenai Peninsula and Matanuska-Susitna Borough were included. It is important to note however, these two areas are *atypical* of the remainder of rural Alaska. This is due to recent high out-migration cause by the current economic recession. Inclusion of the Kenai Peninsula Borough and the Matanuska-Susitna Borough make it appear that out-migration is the rule in rural Alaska when, in fact, it may be confined to the two above areas.

Although a detailed analysis of changes among age component groups could not be included in this study, it is recommended that such an examination be conducted to determine better which communities and areas have new generations growing up and those which may have teenagers, for example, who will be needing new housing soon.

POPULATION FORECASTS FOR ALASKA BY REGION

Population Forecasts by Region:

	POP80	POP85	POP86	POP87	POP88	POP89	POP90	POP91	POP92	POP93
Ahtna	3,211	3,034	2,980	3,093	3,141	3,127	3,121	3,137	3,160	3,206
Aleut	3,853	3,783	3,715	3,857	3,916	3,899	3,891	3,912	3,940	3,997
Arctic Slope	4,149	5,389	5,293	5,494	5,578	5,555	5,543	5,573	5,613	5,694
Bering Sts	6,504	7,770	7,631	7,922	8,043	8,009	7,992	8,035	8,093	8,209
Bristol Bay	5,710	7,033	6,907	7,170	7,280	7,249	7,234	7,272	7,326	7,431
Calista	15,638	18,473	18,143	18,834	19,122	19,041	19,000	19,102	19,242	19,518
Chugach	7,454	8,916	8,757	9,090	9,229	9,190	9,170	9,220	9,287	9,420
Cook Inlet	40,870	73,142	71,836	74,570	75,712	75,390	75,229	75,633	76,185	77,278
Doyon	33,888	47,849	46,995	48,783	49,530	49,320	49,214	49,478	49,840	50,555
Koniag	9,939	11,221	11,021	11,440	11,615	11,566	11,541	11,603	11,688	11,856
NANA	4,831	5,790	5,687	5,903	5,993	5,968	5,955	5,987	6,031	6,117
Sealaska	17,895	22,479	22,078	22,918	23,269	23,170	23,120	23,244	23,414	23,750
TOTAL	153,942	214,879	211,043	219,073	222,429	221,484	221,010	222,196	223,820	227,031
SURVEY TOTAL INCLUDED	153,942	214,879	211,043	219,073	222,429	221,484	221,010	222,196	223,820	227,031
EXCLUDED	247,909	324,721	336,557	318,727	312,571	315,516	318,490	322,804	327,180	332,969
STATEWIDE	401,851	539,600	547,600	537,800	535,000	537,000	539,500	545,000	551,000	560,000

DEMOGRAPHIC SUMMARY FROM STUDY SURVEY

Population by Age and Sex:

	1985 Popul	% Women	% Men	Total Women	Total Men	Med Age Women	Med Age Men
Ahtna	3,034	47%	53%	1,440	1,594	28.0	17.9
Aleut	3783	48%	52%	1,801	1,982	27.2	24.0
Arctic Slope	5389	50%	50%	2,668	2,721	21.9	20.7
Bering Sts	7770	49%	51%	3,784	3,986	15.1	20.1
Bristol Bay	7033	42%	58%	2,922	4,111	26.5	26.2
Calista	18473	46%	54%	8,553	9,920	18.6	21.0
Chugach	8916	52%	48%	4,649	4,267	21.4	29.1
Cook Inlet	73142	50%	50%	36,403	36,739	26.9	28.6
Doyon	47,849	49%	51%	23,494	24,355	27.4	28.9
Koniag	11,221	48%	52%	5,396	5,825	17.5	20.1
NANA	5,790	42%	58%	2,446	3,344	27.1	22.1
Sealaska	22,479	50%	50%	11,240	11,240	23.4	25.3
TOTAL	214,879			104,795	110,084		

The total 1985 population was provided by the Alaska State Demographer's Office. The other data in this table was obtained through this survey. Columns 2 and 3 show the breakdown in percent of women and men. Columns 4 and 5 show the total women and men per region. And columns 6 and 7 show the median age for women and men in the region.

The percent of women and men per region was fairly evenly split. The largest difference was found in Bristol Bay and NANA regions where women constituted 42% of the population and men 58%. There were about 5,300 more men than women in the included population.

The median age for women ranged between 15 and 28 years. The lowest three median ages for women were 15.1, 17.5 and 18.6 years in the Bering Straits, Koniag, and Calista regions, respectively. The median age for men ranged from 18 to 29 years. The lowest four median ages for men were 17.9 in Ahtna, 20.1 in Bering Straits and Koniag, and 20.7 in Arctic Slope.

Demographic summary (cont'd.)

Alaska Native Population:

Calista	98.6%
Bering Sts	98.4%
Ahtna	90.1%
Arctic Slope	89.0%
Bristol Bay	88.9%
NANA	84.1%
Doyon	83.2%
Koniag	74.6%
Sealaska	58.2%
Chugach	50.8%
Aleut	50.0%
Cook Inlet	18.6%
TOTAL	70.4%

The two regions with the highest percent of Alaska Native population were Calista and Bering Straits with over 98%. Seven regions (Calista, Bering Straits, Ahtna, Arctic Slope, Bristol Bay, NANA, and Doyon) all had over 83% Alaska Native populations. Koniag was nearly three-quarters Alaska Native. Cook Inlet had the lowest percent of Alaska Natives with 18.6%.

MISCELLANEOUS SUPPLEMENTARY INFORMATION FROM STUDY SURVEY

- Does your home use any of the following equipment?

Equipment Type	Positive Response
Heat Pump	.19%
Air Exchanger	.39%
High Efficiency Furnace	4.52%
Fireplace Insert	1.10%
Timed Thermostats	2.00%
Complete Caulking	12.91%
Ceiling Fan	4.91%
Appliance Timers	2.78%

- 4.6% of the head of households surveyed said they were aware of the Alaska Home Craftsman program, and 8.3% said they were aware of the Energy Rated Homes program.

- 64% of the households surveyed had telephones in their homes. Of those without a telephone, 57% use a neighbor's phone, 42% use a phone less than 1 mile away from their home, and 1% use a phone 1 to 5 miles from their home.

- In response to the question "Do any of the household members have any of the following supplementary incomes?", the percentages of positive responses are as follows:

Supplementary Income	% of HH
AFDC	8.8%
Public Asst/Welfare	5.6%
Food Stamps	13.0%
Unemployment Insurance	5.2%
Supplementary Soc Sec	12.8%

- (What housing improvements?)

Housing Improvements:

	Yes	Years
BIA's HIP Program	5.6%	1970 to 1987
State Weatherization Program	28.6%	1977 to 1987
Other (usually self)	16.3%	1958 to 1988

- The total number of physically handicapped people surveyed was 97.

INTERVIEWER COMMENTS

Point Hope

Numerous houses had up to 3" of interior ice on the windows, frost on interior back walls, and weatherstripping frozen to the doors. Most of the houses had defective vapor barriers in the attic and walls. Up to 24" of frost was in the attic, and there were numerous exterior signs of moisture leaking through the walls.

Anaktuvuk Pass

Same comment as Point Hope with the additional comment that many houses had non-thermal break door hardware. The inside door handles were covered with ice, as were the inside hinge plates.

Koyukuk, Galena, Eagle, and Dot Lake

Many houses had extremely high interior humidity levels. Most attics had extreme amounts of frost (24" to 36") due to faulty vapor barriers. Almost all ceilings showed signs of moisture damage due to attic frost melting and seeping down through the ceiling during warm periods. The majority of houses had extreme ice build-up on the interior surfaces of windows (2" to 4") making most windows inoperable in winter for ventilation or fire safety purposes.

Mekoryuk, Koyuk, and Kwethluk

Evident effects of high wind were noted. Roofing was missing, five attics had blown-in snow, and most attics had over two feet of frost due to faulty vapor barriers. Many pre-1983 houses displayed visible signs of interior moisture damage due to attic frost and/or snow melting and running down into the house during warm periods.

Old Harbor, Larsen Bay, and Karluk

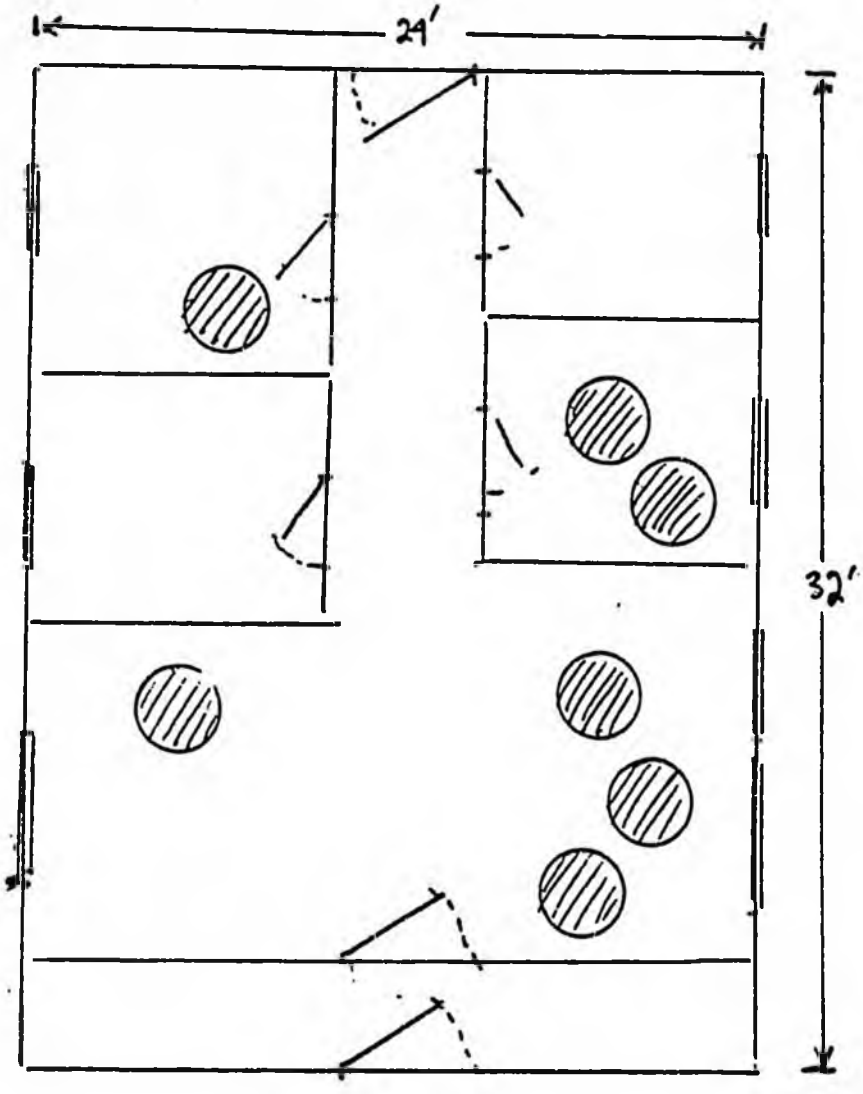
Many owner built and older houses had extreme moisture damage to floor plates, soffits, window sills, and exterior siding. Many older houses had wet attic insulation due to blown-in moisture from rain and high winds. Many houses had inadequate attic ventilation.

Klukwan and Angoon

Many older and owner built houses had signs of extreme moisture damage around window sills, door frames, floors, and attics. Many houses had damp or wet insulation due to rain being blown through faulty bird blocking, missing soffits, missing attic vents, and leaking roofs.

SAMPLE FLOOR PLANS OF TYPICAL RURAL ALASKAN HOUSING PROGRAMS

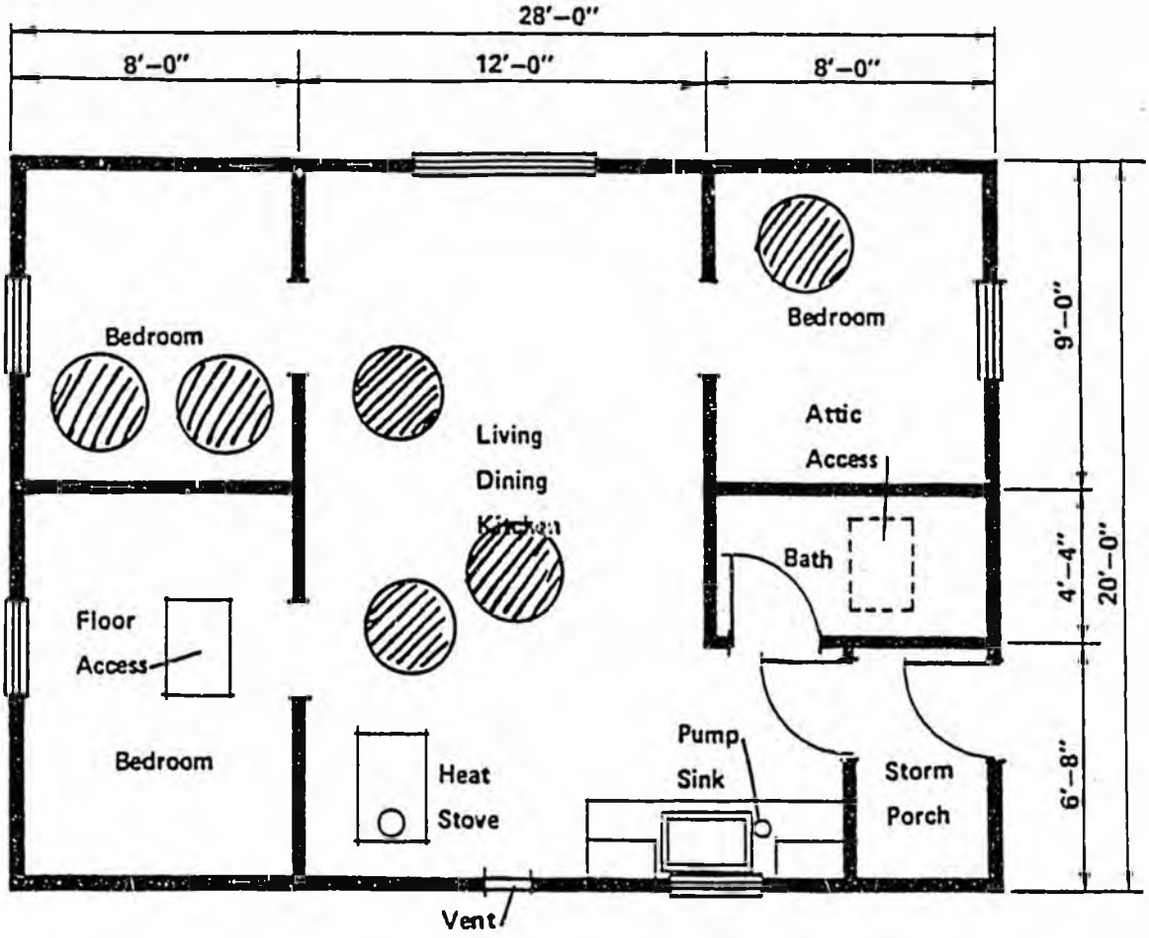
"H.U.D. 500 (Approximately 760 square feet)



Each shaded circle represents the approximate area occupied by one adult standing. No furnishings shown.

SAMPLE FLOOR PLANS OF TYPICAL RURAL ALASKAN HOUSING PROGRAMS

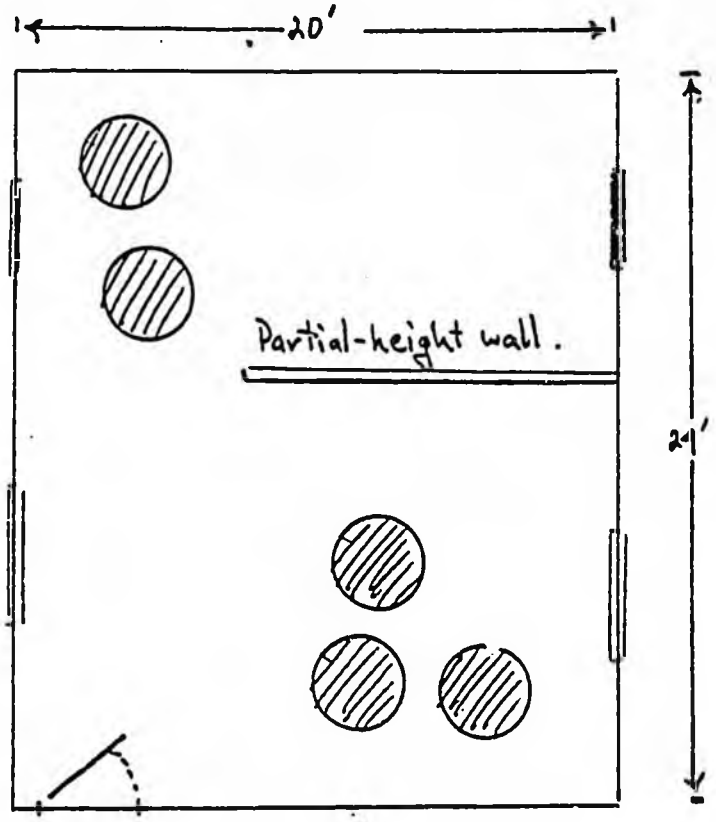
House Number 1 (Approximately 560 square feet)
Kuskokwim and Yukon River Area



Each shaded circle represents the approximate area occupied by one adult standing. No furnishings shown.

SAMPLE FLOOR PLANS OF TYPICAL RURAL ALASKAN HOUSING PROGRAMS

Doyon Log Home (Approximately 480 square feet)



Each shaded circle represents the approximate area occupied by one adult standing. No furnishings shown.

CODE #_____ VILLAGE_____
INTERVIEWER_____

HOUSING NEEDS QUESTIONNAIRE

This survey is being conducted for the State of Alaska Department of Community and Regional Affairs. The results are intended to determine the housing condition in rural parts of Alaska. Your answers are completely confidential.

Rooms_____ # Bedrooms_____ # Stories_____
Year built _____ OR Age of Home _____ years _____

Builder: 1 Self _____ 2 HUD _____ 3 BIA _____
4 Local contractor _____ 5 Other _____ 1 2 3 4 5

Who owns this house? 1 SELF _____ 2 RELATIVE _____ 3 OTHER _____ 1 2 3
Type of Structure: 1 FRAME _____ 2 LOG _____ 3 OTHER _____ 1 2 3
Type of Dwelling: 1 SINGLE FAMILY _____ 2 MULTI-FAMILY _____ 3 MOBILE HOME _____ 1 2 3

Total square footage_____ _____

HOME CONDITION
1 Like new
2 Cosmetic blemishes only
3 Minor repairs needed (such as door or window replacement,etc.)
4 Major repairs needed (replace all windows. roof, etc.; Structurally sound)
5 Rebuildable (NOT structurally sound but GOOD foundation)
6 Demolish and replace (NOT structurally sound and POOR foundation)
8 None/Doesn't exist 9 Cannot determine

Rate the condition of:

Windows	1	2	3	4	5	6	8	9
Doors	1	2	3	4	5	6	8	9
Plumbing	1	2	3	4	5	6	8	9
Foundation	1	2	3	4	5	6	8	9
Overall Home Condition	1	2	3	4	5	6	8	9

Type and number of windows: (circle appropriate number)
Single pane/Storm window 1 2 3 4 5 Thermo pane 1 2 3 4 5
Visqucen 1 2 3 4 5 Broken 1 2 3 4 5 Other 1 2 3 4 5

Is there an egress window up to code? Y N 1 2

Heat Source: (Check all that apply)
1 Wood stove _____ 2 Oil pot _____ 3 Oil furnace _____ 4 Propane _____ 1 2 3 4 5
5 Natural gas _____ 6 Electric _____ 7 Other _____ 6 7

Can you maintain a comfortably warm temperature (about 70 degrees) during the coldest weather? Y N 1 2
Do you have a smoke detector? Y N 1 2

Sewer & Water:
Do you have a sewer system? Y N 1 2
Do you have running water? Y N 1 2

Power Source: 1 Electricity_____ 2 Home Generator_____ 1 2 3 4
3 None_____ 4 Other_____
Insulation:
Is the home insulated? Y N 1 2
If yes, please indicate the thickness in inches:_____attic _____walls

Does your home use any of the following equipment?:

1 Heat pump _____ 2 Air exchanger _____ 3 High efficiency furnace _____ 1 2 3 4 5
4 Firepalce insert (built in wood stove) _____ 5 Timed thermostats _____ 6 7 8
6 Complete caulking (doors windows seams & cracks) _____ 7 Ceiling fan _____
8 Appliance timers (lights, fans) _____

Home Improvements: BIA's HIP Program? Y N when?_____
State's Weatherization Program? Y N when?_____
Other_____? Y N when?_____

Are you aware of: the Alaska Home Craftsman program? Y N 1 2
energy rated homes program? Y N 1 2

Do you have a telephone? Y N 1 2

ASK ONLY IF THERE IS NO PHONE: Where is the closest phone?_____

ASK EVERYONE: How often do you use the phone?

1 Daily_____ 2 Weekly_____ 3 1-3 times/month_____ 4 Rarely/Never_____ 1 2 3 4

Head of Household's Name_____

List everyone who lives in this house, even if they are not present:

	Winter Res Only	Sex	Age	Relation to Home Owner/Renter
1	_____	M F		_____
2	_____	M F		_____
3	_____	M F		_____
4	_____	M F		_____
5	_____	M F		_____
6	_____	M F		_____
7	_____	M F		_____
8	_____	M F		_____
9	_____	M F		_____
10	_____	M F		_____
11	_____	M F		_____
12	_____	M F		_____
13	_____	M F		_____
14	_____	M F		_____

Who lives in this house ONLY during the winter?
(Indicate these people by checking "Winter Res Only" above.)

How many total people move-in during the winter because...
(Fill in appropriate number)

1. _____they can not afford to heat their home
2. _____their home is not in suitable living condition for reasons other
3. _____other heating expense

Total Number of physically handicapped _____ _____

Total Number of Alaska Natives _____ _____

Total Household Income 1987 $_____ 1986 $_____

Your 198 source of income was:

	(Aprroximately)	Earned mostly in: (circle one or both)
Source of Income _____	% of total income _____	1 Summer 2 Winter
Source of Income _____	% of total income _____	1 Summer 2 Winter
Source of Income _____	% of total income _____	1 Summer 2 Winter

Do any household members have ANY of the following supplementary incomes?

1 AFDC _____ 2 Public Asst/Welfare _____ 3 Food Stamps _____

4 Unemployment Ins. _____ 5 Supplementary SS _____ 1 2 3 4 5

I certify that I have completed this interview in accordance with the survey instructions provided me by ASK* Information Search and Rural Cap. The information supplied on this survey is true and accurate to the best of my knowledge.

_____ _____

Interviewer signature Date

VILLAGE_____
INTERVIEWER_____

HOUSING NEEDS QUESTIONNAIRE

INTERVIEWER INSTRUCTIONS:

1. Ask to speak to the head of the household. If the head of the household is not there, ask for the spouse or an elder. If none of these people are present, schedule a return visit if your schedule permits.

2. ONLY ask the question if you can't determine the answer yourself.

3. Before leaving the village, count the number of empty homes and determine which ones are UNinhabitable.

   Total Number of Empty Homes _____; Number UNinhabitable_____

4. For those of you assigned to visit the Regional Housing Authority, please ask them for a listing which indicates, for each of the three or four communities in their jurisdiction, what organization owns which homes under the various programs.

5. When your surveys are complete, mail them at the nearest U.S. Post Office using their one-day bush service. Rural CAP will reimburse this expense when you return. Mail the surveys using the return-address labels and envelopes that are provided.

6. After completing each day's set of questionnaires, please remember to sign the certification form at the end of each survey.

INSTRUCTIONS FOR SURVEY TAKERS:

1. It is essential that you fill out ALL questions completely. NO BLANKS.
2. The small numbers on the right side of each page that look like 1 2 3 4 5, etc., are for data entry use only, not for your use.
3. Please explain this is being done as part of a survey for the Alaska State Legislature and must be completed in time for the 1988 legislative session. Cooperation is appreciated.
4. Many of the questions regarding the physical condition and the construction of the house will require you to make a visual survey and decide for yourself what the answer is.
5. When you get to the section with the question; "Who lives in this house ONLY during the winter?", it is of the utmost importance that you fill out this section, AND, that you ask an additional question.
   **The question is: How many individuals need additional housing? Why? Write in the number of people, how many homes are needed, and why. Just because they want a home, or think that as a result of this survey the government will build them a home, is not sufficient reason. We are talking about need.
6. Income information is desirable, but we cannot force people to tell us their income levels. Try and be persuasive, as the information will help establish how much is needed in additional funding.
7. Under the questions in the Home Condition section, circle the number that corresponds to the condition of the item. For example,if the windows are like new, circle #1 next to "windows"; under "doors", if the door is broken and won't close, circle #4, etc.

APPENDICES

APPENDIX A

CITIES WITH POPULATION OF 1000 OR MORE

Since the methodology required selecting representative communities for survey purposes and communities of population 1000 or more were not representative of the other communities in their regions, these cities were not surveyed. However, many of the cities had current sources of information on the housing stock and condition. So that these communities and their housing characteristics were also included in this study, research was conducted separately for these communities. The primary sources of information were regional housing authorities, borough planning departments, and city planning departments. Data was run against the ASK* Marketing/Information Search computer files for modification.

Note: HUD programs are Mutual Help, Low-Income, and TurnKey.

KODIAK

Population:

6,681	1987	DCRA Municipal and Regional Assistance
6,668	1986	DCRA Municipal and Regional Assistance
6,173	1985	Alaska State Demographer
(6,602	1985	Kodiak Island Borough Special Census)
6,469	1984	Kodiak Island Borough Special Census
6,072	1983	Kodiak Island Borough Special Census
5,873	1982	Kodiak Island Borough Special Census
4,756	1980	1980 Census

Demographics:

Estimated Employment	4688	1985	Kodiak Area Chamber of Commerce
Estimated Employment	4864	1984	Kodiak Area Chamber of Commerce

Housing Stock: This information was obtained from the City of Kodiak.

Kodiak	1982 Kodiak			1987		
	HH Units	Occupied	Vacant	HH Units	Occupied	Vacant
Single Family	1,067	1,010	57	1174	1092	82
Multi-Family	703	681	22	823	789	34
Mobile Home	138	138	0	139	138	1
Total HH Units	1,908	1,829	79	2,136	2,019	117

Housing Programs:

The Kodiak Island Housing Authority had 97 applications for the projects administered in Kodiak on January 1988. The projects consisted of 30 units of Mutual Help homes, 48 Low-Income Public Housing, and 40 units of low to moderate income housing. All units were full in January 1988.

DILLINGHAM

Population:

2,153	1987	DCRA Municipal and Regional Assistance
2,153	1986	DCRA Municipal and Regional Assistance
2,141	1985	Alaska State Demographer
1,563	1980	1980 Census

Housing Programs:

The Bristol Bay Housing Authority had 56 applications for HUD housing, 18 applications for Low-Income housing, and no applications for senior citizen housing as of January 1988. The State of Alaska Housing Assistance Department had 30 applications for Low-Income housing. And the State Hospital had 13 applications for "on compound" housing; there were 25 units and no vacancies. There were 73 applicants for the State Weatherization program in 1987 according to Alaska CDC records.

NOME

Population:

3,876	1987	DCRA Municipal and Regional Assistance
3,876	1986	DCRA Municipal and Regional Assistance
3,191	1985	Alaska State Demographer
2,301	1980	1980 Census

Housing Programs:

The Bering Straits Regional Housing Authority had 2 applications on file for elderly, disabled or handicapped housing; there were 20 units and no vacancies as of January 1988. Nome Eskimo Community, part of BIA, had 10 applications for Low-Income housing. And the Alaska State Building Authority had 6 applications for the renter program and 1 application for the new home owner program.

KOTZEBUE

Population:

3,594	1987	DCRA Municipal and Regional Assistance
3,594	1986	DCRA Municipal and Regional Assistance
2,633	1985	Alaska State Demographer
2,054	1980	1980 Census

Housing Stock:

The housing stock information was obtained from the Northwest Arctic Borough Village Survey of January 1987.

Single Family	558
Multi-Family	163
Mobile Home	0
Total HH Units	2708

Housing Programs:

The Northeast Inupiat Housing Authority had 53 applications for Low-Income housing as of January 1988; there were 43 units and no vacancies. The Housing Authority also had 80 applications for Mutual Help housing, 50 of which were eligible. Twenty-five (25) HUD homes are scheduled to be built in the summer of 1988. Kotzebue I.R.A. had 64 applications, and Maniilaq Association had none.

PETERSBURG

Population:

3,282	1987	DCRA Municipal and Regional Assistance
3,252	1986	DCRA Municipal and Regional Assistance
3,145	1985	Alaska State Demographer
2,821	1980	1980 Census

Housing Stock: This information was obtained from the City of Petersburg and last updated in July 1987.

	Units
Single Family	636
Multi-Family	242
Mobile Homes	251

Housing Programs:

In January 1988, the Alaska State Building Authority had 20 applications for Low-Income housing: 16 applications for 2 bedroom units, 3 for 3 bedroom units, and 1 for a 4 bedroom unit. The municipally owned Senior Citizens Housing had 6 applications; however, there were 3 vacancies in the building, and none of the applicants wished to move in at that time.

VALDEZ

Population:

3,686	1987	DCRA Municipal and Regional Assistance
(3,690	1987	City of Valdez Population Census Report)
3,687	1986	DCRA Municipal and Regional Assistance
(3,687	1986	City of Valdez Population Census Report)
3,271	1985	Alaska State Demographer
3,744	1984	1984 Memo from Community Development Director
3,694	1982	1984 Memo from Community Development Director
3,079	1980	1980 Census

Demographics:

The 1984 City Census described the age groups by gender as follows:

Age	Men	Women	Unknown Gender	Total
0-15	466	490		
16-20	115	102		
21-35	527	541		
36-60	536	413		
60+	53	34		
Unknown	22	256		
Total	1719	1836	189	3744

Housing Stock:

Total number of housing units	1308	1987 City Census
Number of occupied units	1100	1987 City Census
Number of vacant units	208	1987 City Census

Housing Stock in 1984:

	Units	Occupied
Single Family	529	512
Multi-Family	245	217
Mobile Home	534	473
Total Units	1308	1202
Total Households	2080	1880

Housing Programs:

The Alaska State Building Authority had 10 applications for Low-Income housing in January 1988; there were 14 units and no vacancies. The Authority also had 8 applications for Section 8 housing although Section 8 housing does not exist in Valdez. The North Pacific Rim Native Association had 37 applications for Low-Income HUD housing; there were 20 units and no vacancies. And the Valdez Senior Citizens Center had 23 applications for Low-Income S.C. housing.

CORDOVA

Population:

2,585	1987	DCRA Municipal and Regional Assistance
2,520	1986	DCRA Municipal and Regional Assistance
1,901	1985	Alaska State Demographer
1,879	1980	1980 Census

Housing Stock for 1987 reported by City of Cordova:

	Units
Single Family	348
Multifamily	297
Mobile Homes	197
Total Units	842
Estimated Number of Households	1139

KENAI

Population:

6,546	1987	DCRA Municipal and Regional Assistance
(6,546	1987	Kenai Penirsula Borough 1987 Special Census)
6,434	1986	DCRA Municipal and Regional Assistance
6,518	1985	Alaska State Demographer
6,173	1984	Kenai Peninsula Borough 1987 Special Census
5,231	1982	Kenai Peninsula Borough 1987 Special Census
4,324	1980	1980 Census

Demographics: In 1984, there were 146 men and 149 women 60 years or older.

Housing Stock: There were 2,449 housing units in 1984 and 2,039 in 1982.

------1984------	HH Units	Occupied	Vacant
Single Family	1,310	1,174	136
Multi-Family	838	758	80
Mobile Home	301	273	28
Total HH Units	2,449	2,205	244

SEWARD

Population:

2,279	1987	DCRA Municipal and Regional Assistance
(2,400	1987	Kenai Peninsula Borough 1987 Special Census)
2,279	1986	DCRA Municipal and Regional Assistance
2,152	1985	Alaska State Demographer
2,072	1984	Kenai Peninsula Borough 1987 Special Census
1,828	1982	Kenai Peninsula Borough 1987 Special Census
1,843	1980	1980 Census

Demographics: In 1984, there were 111 men and 118 women 60 years or older.

Housing Stock: There were 903 housing units in 1984 and 761 in 1982.

------1984------	HH Units	Occupied	Vacant
Single Family	552	515	37
Multi-Family	337	285	52
Mobile Home	14	14	0
Total HH Units	903	814	89

STERLING

Population:

2,800	1987	Kenai Peninsula Borough 1987 Special Census
2,459	1984	Kenai Peninsula Borough 1987 Special Census
1,837	1982	Kenai Peninsula Borough 1987 Special Census

The population for 1984 is affected by a boundary change.

Demographics: In 1984, there were 71 men and 52 women 60 years or older.

Housing Stock: There were 1,103 housing units in 1984 and 764 in 1982.

------1984------	HH Units	Occupied	Vacant
Single Family	868	624	244
Multi-Family	33	27	6
Mobile Home	202	157	45
Total HH Units	1,103	808	295

SOLDOTNA

Population:

3,818	1987	DCRA Municipal and Regional Assistance
(3,668	1987	Kenai Peninsula Borough 1987 Special Census)
3,597	1986	DCRA Municipal and Regional Assistance
3,818	1985	Alaska State Demographer
3,597	1984	Kenai Peninsula Borough 1987 Special Census
3,008	1982	Kenai Peninsula Borough 1987 Special Census
2,320	1980	1980 Census

Demographics: In 1984, there were 64 men and 85 women 60 years or older.

Housing Stock: There were 1,313 housing units in 1984 and 1,108 in 1982.

------1984------	HH Units	Occupied	Vacant
Single Family	808	762	46
Multi-Family	337	307	30
Mobile Home	168	156	12
Total HH Units	1,313	1,225	88

NIKISKI

Population:

4,169	1987	Kenai Peninsula Borough 1987 Special Census
1,630	1985	Alaska State Demographer
3,661	1984	Kenai Peninsula Borough 1987 Special Census
2,977	1982	Kenai Peninsula Borough 1987 Special Census
1,109	1980	1980 Census

Demographics: In 1984, there were 96 men and 52 women 60 years or older.

Housing Stock: There were 1,415 housing units in 1984 and 1,127 in 1982.

------1984------	HH Units	Occupied	Vacant
Single Family	905	751	154
Multi-Family	75	53	22
Mobile Home	435	364	71
Total HH Units	1,415	1,168	247

HOMER

Population:

4,020	1987	DCRA Municipal and Regional Assistance
4,020	1986	DCRA Municipal and Regional Assistance
3,632	1985	Alaska State Demographer
3,429	1984	Kenai Peninsula Borough 1987 Special Census
2,897	1982	Kenai Peninsula Borough 1987 Special Census
2,209	1980	1980 Census

Demographics: In 1984, there were 110 men and 121 women 60 years or older.

Housing Stock: There were 1,441 housing units in 1984 and 1,207 in 1982.

------1984------	HH Units	Occupied	Vacant
Single Family	809	734	75
Multi-Family	402	354	48
Mobile Home	230	218	12
Total HH Units	1,441	1,306	135

FRITZ CREEK

Population:

2,006	1987	Kenai Peninsula Borough 1987 Special Census
1,610	1985	Alaska State Demographer
1,762	1984	Kenai Peninsula Borough 1987 Special Census
1,324	1982	Kenai Peninsula Borough 1987 Special Census
302	1980	1980 Census

Demographics: In 1984, there were 31 men and 37 women 60 years or older.

Housing Stock: There were 679 housing units in 1984 and 547 in 1982.

------1984------	HH Units	Occupied	Vacant
Single Family	580	502	78
Multi-Family	27	25	2
Mobile Home	72	61	11
Total HH Units	679	588	91

PALMER

Population:

3,116	1987	DCRA Municipal and Regional Assistance
3,116	1986	DCRA Municipal and Regional Assistance
3,016	1985	Alaska State Demographer
2,792	1984	Matanuska-Susitna Borough Population Trends March 1987
2,738	1983	Matanuska-Susitna Borough Population Trends March 1987
2,524	1982	Matanuska-Susitna Borough Population Trends March 1987
2,576	1981	Matanuska-Susitna Borough Population Trends March 1987
2,141	1980	1980 Census

Housing Stock:

	Total Units	Occupied	Vacant
1982	883	817	66
1983	970	944	26
1984	961	883	78
1985	1,079	995	84

Housing Programs:

There were 40 applicants for the State Weatherization Program in 1987 according to Alaska CDC records.

WASILLA

Population:

3,977	1987	DCRA Municipal and Regional Assistance
3,977	1986	DCRA Municipal and Regional Assistance
3,666	1985	Alaska State Demographer
3,548	1984	Matanuska-Susitna Borough Population Trends March 1987
2,944	1983	Matanuska-Susitna Borough Population Trends March 1987
2,349	1982	Matanuska-Susitna Borough Population Trends March 1987
2,168	1981	Matanuska-Susitna Borough Population Trends March 1987
1,559	1980	1980 Census

Housing Stock:

	Total Units	Occupied	Vacant
1982	896	792	104
1983	1,166	947	219
1984	1,009	918	91
1985	1,585	1,236	349

Housing Programs:

There were 62 applicants for the State Weatherization Program in 1987 according to Alaska CDC records.